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**Classification of
Instructional Programs:
2000 Edition**

**U.S. Department of Education
Office of Educational Research and Improvement NCES 2002-165**

U.S. Department of Education

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FOREWORD

The purpose of the Classification of Instructional Programs (CIP) is to provide a taxonomic scheme that will support the accurate tracking, assessment, and reporting of fields of study and program completions activity. CIP was originally developed by the U.S. Department of Education's National Center for Education Statistics (NCES) in 1980, with revisions occurring in 1985 and 1990. The 2000 edition of the CIP (CIP-2000) is the third revision of the taxonomy and presents an updated taxonomy of instructional program classifications and descriptions.

Revisions to national and international coding schemes such as the CIP require that users be given ample opportunity to comment on proposed changes as well as sufficient time to make these changes in their reporting systems. In developing the CIP-2000, public comment was invited on two review drafts. This final publication reflects the comments that were received or agreements that were reached on the approach to particular revisions. Additionally, to allow sufficient time for users to implement the CIP-2000 in their databases and reporting systems, NCES will give users at least 2 years from the date of publication of the CIP-2000 to implement the revised taxonomy in reporting on postsecondary program completions.

The CIP is the accepted federal government statistical standard on instructional program classifications and is used in a variety of education information surveys and databases. Since 1980 when it was first published, the CIP has been used by NCES in the Integrated Postsecondary Education Data System (IPEDS) and its predecessor, the Higher Education General Information Survey (HEGIS). It is also used by other Department of Education offices, such as the Office for Civil Rights, the Office of Vocational and Adult Education, and the Office of Special Education, and serves as the standard on instructional programs for other federal agencies, including the (former) National Occupational Information Coordinating Committee (NOICC), the National Science Foundation and the Department of Commerce (Bureau of the Census), the Department of Labor (Bureau of Labor Statistics), and others. The CIP is also used by the National Academy of Sciences, state agencies, national associations, academic institutions, and employment counseling services as the basis for collecting, reporting, and analyzing instructional program data.

The CIP-2000 has been adopted as the standard field of study taxonomy by Statistics Canada. The decision to adopt the CIP-2000 was based on the comprehensiveness and detail of the CIP and the potential for enhanced comparability with U.S. education data. The CIP will be phased in to replace Statistics Canada's University Student Information System (USIS) and Community College Student Information System (CCSIS) as well as the Canadian Census major field of study classification. Transition from the USIS, CCSIS, and Canadian Census codes to CIP-2000 will begin with the implementation of the postsecondary Enhanced Student Information System (ESIS) by the Canadian Centre for Education Statistics (CES). Consultations between the CES and the NCES and National Library of Education (NLE) have resulted in the inclusion of Canadian content within the CIP-2000.

The number of instructional programs added to the CIP-2000 is a testament not only to the changing nature of postsecondary education in the United States and Canada but also to the completeness that this publication has achieved. We are pleased to present this edition of the CIP.

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Canadian content was contributed by Mr. Alan Goodall and Mr. Dennis Cusak, Postsecondary Education section, Centre for Education Statistics, Statistics, Canada. Authorized translations into French were prepared by Statistics Canada.

We would like to also acknowledge and thank the representatives of the academic and professional associations, accrediting bodies, and federal and state offices who provided valuable assistance towards the development of the CIP-2000.

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III: CIP-2000 TAXONOMY: FULL LISTING OF PROGRAM CODES, TITLES, AND DEFINITIONS

Guide to Using the CIP Taxonomy

A brief guide for using the CIP-2000 taxonomy follows. The Guide delineates the organizational structure and standard conventions used to develop the CIP-2000 taxonomy.

Organization of the CIP Taxonomy. The programs within the CIP taxonomy are organized on 3 levels: 1) a 2-digit series, 2) a 4-digit series, and 3) a 6-digit program level. The CIP codes and their corresponding programs are listed in ascending order by the code number. Skips or breaks in code continuity result from codes/programs that have either been moved within the taxonomy or deleted. Refer to table 2 and appendices B-1 through B-3 for listings of code/program moves and deletions.

The *2-digit* Series codes and programs represent summary groups of related programs. The 2-digit codes and programs are located at the beginning of each program group; the program titles appear in bold type and capital letters (Examples: **01. AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES; 13. EDUCATION, and 22. LEGAL PROFESSIONS AND STUDIES**). Each 2-digit group contains both 4-digit series and 6-digit code programs.

The *4-digit* Series codes and programs represent an intermediate aggregation of programs. The 4-digit series and the programs that comprise them are listed in numerical sequence. Program titles at this level appear in bold type. Examples: **01.00 Agriculture, General; 01.01 Agricultural Business and Management, and 01.02 Agricultural Mechanization.**

The *6-digit* codes and program listings represent single instructional programs. These are the most detailed program classifications within the CIP; they are also the codes and programs used by institutions to report degree completions and fields of study data. The numbering sequence at this level is similar to the 4-digit Series sequence, with two more digits added after the 4-digit Series number. The standard format for the 6-digit programs is as follows: **01.0101 Agricultural Business and Management, General; and 19.0707 Family and Community Services.** Programs with a more general focus appear at the beginning of the Series, Example: Agriculture Business and Management, General (code 01.0101) appears as the first program listing. An "Other" category appears as the final program within the series. This coding option is included to provide a category for reporting data on specific programs that are not listed within the series. Example: 01.0199, Agricultural Business and Management, Other.

Programs Added to the CIP (New CIP Programs). For ease of identification and use, programs that have been added to the taxonomy are identified in two ways: 1) the program title appears in italics and 2) a "NEW" qualifier appears in parenthesis after the program title. Programs classified as "NEW" are programs that have either been added to the taxonomy since the release of the CIP-1990 or have been reinstated from previous editions of the CIP. Examples: **01.08 Agricultural Public Services (NEW); 01.0802 Agricultural Communication/Journalism (NEW); and 51.2209 Maternal and Child Health (NEW).** Programs such as *Urban Forestry* (code 03.0508); and *Comparative Psychology* (code 42.0501) are also classified as "NEW" because they are restored programs (i.e., programs/codes that were deleted from previous taxonomies but have been reinstated in the CIP-2000). A list of all new programs is provided in *table 1*.

New CIP Codes. The CIP-2000 taxonomy also contains several new numeric CIP codes (i.e., codes that were added to the taxonomy for the first time). These new CIP codes are not necessarily indicative of new programs. In many cases, they reflect codes that were added to accommodate a reorganization or repositioning of programs or program groups. New CIP codes are not identified within the taxonomy but are listed in *appendix C*. Example: code 51.3603 was added to the taxonomy because the program Hypnotherapy was moved from its location in the CIP-1990 to a newly-established program group (Series 51.36: Movement and Mind-Body Therapies and Education).

III. CIP-2000 TAXONOMY: FULL LISTING OF PROGRAM CODES, TITLES, AND DEFINITIONS

Guide to Using the CIP Taxonomy

Deleted Programs. Programs that have been deleted from the CIP are identified as follows: 1) the program code is enclosed in brackets, and 2) a notation that the program has been *Deleted* follows the program title. There are two types of deletions, *Straight Deletions* which indicate a code or series has been completely removed from the taxonomy and *Crosswalked Deletions* which identify programs that have been deleted as separate entries but combined or integrated into other existing programs. Instructions are provided for these deletions indicating where the program is currently located and should be reported.

Example 1: **[03.04] Forest Production and Processing.** (Deleted)

Example 2: **[03.0203] Natural Resources Law Enforcement and Protective Services.**
(Deleted, Report under 03.0299)

Moved Programs. Programs that have been repositioned within the CIP are identified in 2 ways: 1) the program code is enclosed in parentheses and 2) a notation is provided after the program title indicating where the program has been moved.

Example 1: **(01.0501) Agricultural/Farm Supplies Retailing and Wholesaling.** (Moved, Report under 01.0105).

Example 2: **(15.1101) Engineering Technology, General.** (Moved, Report under 15.0000)

Note ➡ A summary of *Moved* programs is provided in *table 2*. Specific program movements are identified in the Crosswalk of CIP-1990 to CIP-2000 Codes and Programs (*table 3*).

Cross-references. Cross-references or crosswalks are provided to refer the CIP user to related codes/programs within the CIP. Their primary purpose is to refer the CIP user to a more appropriate code/classification for use in reporting a program. Cross-references are located immediately below the program that they are related to and are preceded by 5 dashes in the place where a CIP code would appear. The title of the Series or program that the CIP user is referred to is listed, followed by a (*Report under ...*) instruction that indicates which program should be considered for use. Cross-references are made to specific programs (i.e., 6-digit programs) or to 4- or 2-digit groups.

Example 1: **14.0701 Chemical Engineering**
----- **Chemistry.** (Report under 40.05 Series)
----- **Chemical Technology/Technician.** (Report under 41.0301)

A second type of cross-reference uses a (*See Also ...*) notation to refer the user to a comparable program located in another 2-digit series that should be considered for use.

Example 2: **19.0201 Business Family and Consumer Sciences/Human Sciences.**
----- **Hospitality Administration/Management.** (See also 52.09 Series)

Multiple Program Titles. Program listings with multiple titles indicate that two or more interchangeable titles are in use for an instructional program. The program titles appear with a *Slash ("/")* separating the two titles in use. The most commonly used title appears first, followed by the title that is used less frequently. (Examples: **43.0103, Criminal Justice/Law Enforcement Administration** and **50.0502, Technical Theatre/Theatre Design and Technology**).

CIP-2000 TAXONOMY: FULL LISTING OF PROGRAM CODES, TITLES, AND DEFINITIONS

CHAPTER I: ACADEMIC AND OCCUPATIONALLY-SPECIFIC PROGRAMS

The program codes and series in this chapter define instructional programs that are offered at the postsecondary level. All of the programs are offered for full academic credit and lead to specific awards, including degrees, diplomas, and certificates.

01. AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES. Instructional programs that focus on agriculture and related sciences and that prepare individuals to apply specific knowledge, methods, and techniques to the management and performance of agricultural operations.

----- **FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES.** (Report under 19. Series)

----- **BIOLOGICAL AND BIOMEDICAL SCIENCES.** (Report under 26. Series)

01.00 Agriculture, General. (NEW) Instructional content is defined in code 01.0000.

01.0000 Agriculture, General. A program that focuses on the general principles and practice of agricultural research and production and that may prepare individuals to apply this knowledge to the solution of practical agricultural problems. Includes instruction in basic animal, plant, and soil science; animal husbandry and plant cultivation; soil conservation; and agricultural operations such as farming, ranching, and agricultural business. *(Moved from 02.0101)*

01.01 Agricultural Business and Management. Instructional content for this group of programs is defined in codes 01.0101-01.0199.

01.0101 Agricultural Business and Management, General. A general program that focuses on modern business and economic principles involved in the organization, operation, and management of agricultural enterprises.

----- **Business Administration and Management, General.** (See also 52.0201)

01.0102 Agribusiness/Agricultural Business Operations. A program that prepares individuals to manage agricultural businesses and agriculturally related operations within diversified corporations. Includes instruction in agriculture, agricultural specialization, business management, accounting, finance, marketing, planning, human resources management, and other managerial responsibilities.

----- **Operations Management and Supervision.** (See also 52.0205)

01.0103 Agricultural Economics. A program that focuses on the application of economics to the analysis of resource allocation, productivity, investment, and trends in the agricultural sector, both domestically and internationally. Includes instruction in economics and related subfields as well as applicable agricultural fields.

----- **Natural Resource Economics.** (Report under 03.0204)

- **Applied Economics.** (Report under 45.0602)
- 01.0104 Farm/Farm and Ranch Management.** A program that prepares individuals to manage farms, ranches, and similar enterprises. Includes instruction in applicable agricultural specialization, business management, accounting, taxation, capitalization, purchasing, government programs and regulations, operational planning and budgeting, contracts and negotiation, and estate planning.
- **Entrepreneurship/Entrepreneurial Studies.** (Report under 52.0701)
- **Small Business Management.** (Report under 52.0703)
- 01.0105 Agricultural/Farm Supplies Retailing and Wholesaling.** A program that prepares individuals to sell agricultural products and supplies, provide support services to agricultural enterprises, and purchase and market agricultural products. Includes instruction in basic business management, marketing, retailing and wholesaling operations, and applicable principles of agriculture and agricultural operations.
(Moved from 01.0501)
- 01.0106 Agricultural Business Technology. (NEW)** A program that prepares individuals to perform specialized support functions related to agricultural business offices and operations and to operate agricultural office equipment, software, and information systems. Includes instruction in basic agricultural business principles, office management, equipment operation, standard software, and database management.
- 01.0199 Agricultural Business and Management, Other.** Any instructional program in agricultural business and management not listed above.
- 01.02 Agricultural Mechanization.** Instructional content for this group of programs is defined in codes 01.0201-01.0299.
- 01.0201 Agricultural Mechanization, General.** A program that generally prepares individuals to sell, select, and service agricultural or agribusiness technical equipment and facilities, including computers, specialized software, power units, machinery, equipment structures, and utilities. Includes instruction in agricultural power systems; planning and selecting materials for the construction of support facilities; mechanical practices associated with irrigation and water conservation; erosion control; and agricultural data processing systems.
- **Agricultural Engineering.** (Report under 14.0301)
- **Agricultural Technology.** (Report under 01.10 Series)
- 01.0204 Agricultural Power Machinery Operation.** A program that prepares individuals to operate specialized farm, ranch, and agribusiness power equipment of a stationary, mobile, and/or hand-operated nature. Includes instruction in operating specialized equipment such as terrestrial and airborne crop spraying equipment; tractors and hauling equipment; planting and harvesting equipment; cutting equipment; power sources and systems for silos, irrigation, pumping, and applications such as dairy, feeding and, shearing operations; processing equipment; and applicable electrical, mechanical, and safety principles.

- **Transportation and Materials Moving Services.** (Report under 49. Series)
- 01.0205** ***Agricultural Mechanics and Equipment/Machine Technology. (NEW)***
 A program that prepares individuals to maintain and repair specialized farm, ranch, and agribusiness power equipment and vehicles. Includes instruction in the principles of diesel, combustion, electrical, steam, hydraulic, and mechanical systems and their application to the maintenance of terrestrial and airborne crop spraying equipment; tractors and hauling equipment; planting and harvesting equipment; cutting equipment; power sources and systems for silos; irrigation and pumping equipment; dairy, feeding and, shearing operations; and processing systems.
- **Vehicle Maintenance and Repair Technologies.** (Report under 47.06 Series)
- 01.0299** **Agricultural Mechanization, Other.** Any instructional program in agricultural mechanization not listed above.
- 01.03** **Agricultural Production Operations.** Instructional content for this group of programs is defined in codes 01.0301-01.0399.
- 01.0301** **Agricultural Production Operations, General.** A program that focuses on the general planning, economics, and use of facilities, natural resources, equipment, labor, and capital to produce plant and animal products, and that may prepare individuals for work in farming, ranching, and agribusiness.
- 01.0302** **Animal/Livestock Husbandry and Production.** A program that prepares individuals to select, breed, care for, process, and market livestock and small farm animals. Includes instruction in basic animal science, animal nutrition, and animal health as applied to various species and breeds; design and operation of housing, feeding, and processing facilities; and related issues of safety, applicable regulations, logistics, and supply.
- 01.0303** **Aquaculture.** A program that prepares individuals to select, culture, propagate, harvest, and market domesticated fish, shellfish, and marine plants, both freshwater and saltwater. Includes instruction in the basic principles of aquatic and marine biology; health and nutrition of aquatic and marine life; design and operation of fish farms, breeding facilities, culture beds, and related enterprises; and related issues of safety, applicable regulations, logistics, and supply.
- **Fishing and Fisheries Science and Management.** (Report under 03.0301)
- **Marine Biology and Biological Oceanography.** (Report under 26.1302)
- **Aquatic Biology/Limnology.** (Report under 26.1304)
- **Commercial Fishing.** (Report under 49.0303)

- 01.0304** **Crop Production.** A program that prepares individuals to cultivate grain, fiber, forage, oilseed, fruits and nuts, vegetables, and other domesticated plant products. Includes instruction in basic principles of plant science, health, and nutrition as applied to particular species and breeds; soil preparation and irrigation; pest management; planting and harvesting operations; product marketing; and applicable issues of safety, regulation, logistics, and supply.
- 01.0306** **Dairy Husbandry and Production. (NEW)** A program that prepares individuals to manage the selection and care of dairy animals and associated dairy farm and processing facilities and operations. Includes instruction in basic animal and dairy science; dairy animal nutrition and health; design and operation of dairy housing, feeding, and processing facilities and equipment; and related issues of safety, sanitation, shipping and handling, and applicable regulations.
- 01.0307** **Horse Husbandry/Equine Science and Management. (NEW)** A program that prepares individuals to manage the selection, breeding, care, and maintenance of work, athletic, and show horses; and horse farms, stables, tracks and related equipment and operations. Includes instruction in applicable principles of animal science, care, and health; stable and track management; design and operation of facilities and equipment; and related issues such as regulations, business management; and logistics.
- 01.0399** **Agricultural Production Operations, Other.** Any instructional program in agricultural production operations not listed above.
- 01.04** **Agricultural and Food Products Processing.** Instructional content is defined in code 01.0401.
- 01.0401** **Agricultural and Food Products Processing.** A program that prepares individuals to receive, inspect, store, process, and package agricultural products in the form of human food consumables, animal or plant food, or other industrial products. Includes instruction in the nutrient and industrial properties of various agricultural products; logistics and storage procedures; chemical and mechanical processing operations; packaging; safety and health requirements; and related technical and business principles.
- 01.05** **Agricultural and Domestic Animal Services.** Instructional content for this group of programs is defined in codes 01.0504-01.0599.
- **Veterinary Medicine (DVM).** (Report under 51.24 Series)
- (01.0501)** **Agricultural/Farm Supplies Retailing and Wholesaling.** (Moved, Report under 01.0105)
- 01.0504** **Dog/Pet/Animal Grooming. (NEW)** A program that prepares individuals to provide cosmetic services for household pets, show animals, work animals and animal athletes. Includes instruction in skin, coat, and pelt grooming and styling; skin care; hoof, nail, and claw care; animal massage; minor first aid and veterinary referral; animal grooming products and applications; health and safety; and applicable regulations.

----- **Cosmetology and Related Personal Grooming Services.** (Report under 12.04 Series)

01.0505 Animal Training. A program that prepares individuals to teach and exercise animals for leisure, sport, show, and professional purposes. Includes instruction in animal psychology, health, and safety; human-animal interaction; learning and behavior styles associated with different breeds and species; and the technical and pedagogical aspects of training animals for such specific functions as obedient household pets, performing show animals, animal athletes, care-giving (e.g., seeing-eye dogs), search and rescue, and police/security work.

01.0507 Equestrian/Equine Studies. A program that focuses on the horse, horsemanship, and related subjects and prepares individuals to care for horses and horse equipment; ride and drive horses for leisure, sport, show, and professional purposes; and manage the training of horses and riders. Includes instruction in horse breeding, nutrition, health, and safety; history of the horse and horsemanship; horse development and training; riding and equestrian technique; stable, paddock, and track management; and equipment maintenance and repair.

----- **Veterinary/Animal Health Technician/Assistant.** (Report under 51.0808)

01.0508 Taxidermy/Taxidermist. (NEW) A program that prepares individuals to reproduce life-like three-dimensional representations of living animals for permanent display using elements of the deceased specimen(s) as well as artificial materials, and to manage taxidermy services and businesses. Includes instruction in specimen grading and selection, caping and fleshing, preservation procedures, tanning, drying, measurements, form and armature construction, carpentry and woodworking, molding and casting, drawing, sculptural techniques, painting and finishing techniques, basic business operations, customer communications, and applicable laws and regulations.

01.0599 Agricultural and Domestic Animal Services, Other. Any instructional program in agricultural and domestic animal services not listed above.

01.06 Applied Horticulture and Horticultural Business Services. Instructional content for this group of programs is defined in codes 01.0601-01.0699.

01.0601 Applied Horticulture/Horticulture Operations, General. A program that focuses on the general production and processing of domesticated plants, shrubs, flowers, foliage, trees, groundcovers, and related plant materials; the management of technical and business operations connected with horticultural services; and the basic scientific principles needed to understand plants and their management and care.

01.0603 Ornamental Horticulture. A program that focuses on domesticated plants and plant materials used for decorative and recreational applications and prepares individuals to breed, grow, and utilize ornamental plant varieties for commercial and aesthetic purposes. Includes instruction in applicable plant science subjects, the environmental design and artistic aspects of horticultural product usage, and the management of horticultural operations.

- 01.0604 Greenhouse Operations and Management.** A program that prepares individuals to produce, store, and deliver plant species in controlled indoor environments for wholesale, commercial, research, or other purposes. Includes instruction in applicable principles of plant science; climate, irrigation, and nutrition control equipment operation and maintenance; facilities management; inventory control; safety procedures; and personnel supervision.
- 01.0605 Landscaping and Groundskeeping.** A program that prepares individuals to manage and maintain indoor and/or outdoor ornamental and recreational plants and groundcovers and related conceptual designs established by landscape architects, interior designers, enterprise owners or managers, and individual clients. Includes instruction in applicable principles of horticulture, gardening, plant and soil irrigation and nutrition, turf maintenance, plant maintenance, equipment operation and maintenance, personnel supervision, and purchasing.
- **Environmental Design.** (Report under 04.0401)
- **Landscape Architecture.** (Report under 04.0601)
- 01.0606 Plant Nursery Operations and Management.** A program that prepares individuals to operate and manage outdoor plant farms, tree and shrub nurseries, and related facilities that develop domesticated plant products for propagation, harvesting, and transplantation. Includes instruction in applicable principles of plant science; farm and business management; nursery operations; equipment operation and maintenance; safety procedures; and personnel supervision.
- 01.0607 Turf and Turfgrass Management.** A program that focuses on turfgrasses and related groundcover plants and prepares individuals to develop ornamental or recreational grasses and related products; plant, transplant, and manage grassed areas; and to produce and store turf used for transplantation. Includes instruction in applicable plant sciences, genetics of grasses, turf science, use analysis, turf management, and related economics.
- 01.0608 Floriculture/Floristry Operations and Management. (NEW)** A program that prepares individuals to operate and manage commercial and contract florist enterprises, supply and delivery services, and flower catering services. Includes instruction in the applicable principles of plant science; purchasing, storage, and delivery systems; floral design and arranging; and principles of business management.
- 01.0699 Applied Horticulture/Horticultural Business Services, Other.** Any instructional program in horticultural service operations not listed above.

01.07 International Agriculture. Instructional content is defined in code 01.0701.

- 01.0701 International Agriculture.** A program that focuses on the application of agricultural management and scientific principles to the problems of global food production and distribution, and to the study of the agricultural systems of other countries. Includes instruction in agricultural economics; comparative agricultural systems; international agribusiness and law; third-world development studies and economic

development; and global applications of climate, soil, water resources, ecological and environmental studies, and animal and plant sciences.

01.08 Agricultural Public Services. (NEW) Instructional content for this group of programs is defined in codes 01.0801- 01.0899.

01.0801 Agricultural and Extension Education Services. A program that prepares individuals to provide referral, consulting, technical assistance, and educational services to gardeners, farmers, ranchers, agribusinesses, and other organizations. Includes instruction in basic agricultural sciences, agricultural business operations, pest control, adult education methods, public relations, applicable state laws and regulations, and communication skills. *(Moved from 02.0102)*

Agricultural Teacher Education. (Report under 13.1301)

01.0802 Agricultural Communication/Journalism. (NEW) A program that prepares individuals to apply journalistic, communication, and broadcasting principles to the development, production, and transmittal of agricultural information. Includes instruction in basic journalism, broadcasting, film/video, and communication techniques; the production of technically specialized information products for agricultural audiences; and the principles of agricultural sciences and business operations needed to develop and communicate agricultural subject matter in effective ways.

Journalism. (Report under 09.0401)

Broadcast Journalism. (Report under 09.0402)

Organizational Communications, Public Relations, and Advertising. (Report under 09.09 Series)

01.0899 Agricultural Public Services, Other. (NEW) Any instructional program in general agricultural sciences and related services not listed above.

01.09 Animal Sciences. Instructional content for this group of programs is defined in codes 01.0901– 01.0999. *(Moved from 02.02 Series)*

BIOLOGICAL AND BIOMEDICAL SCIENCES. (Report under 26. Series)

01.0901 Animal Sciences, General. A general program that focuses on the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. Includes instruction in the animal sciences, animal husbandry and production, and agricultural and food products processing. *(Moved from 02.0201)*

Biochemistry, Biophysics, and Molecular Biology. (Report under 26.02 Series)

Cell/Cellular Biology and Anatomical Sciences. (Report under 26.04 Series)

- **Ecology, Evolution, and Systematics.** (Report under 26.13 Series)
- **Zoology/Animal Biology.** (Report under 26.0701)
- **Biometry/Biometrics.** (Report under 26.1101)
- **Bioinformatics.** (Report under 26.1103)
- 01.0902** **Agricultural Animal Breeding.** A program that focuses on the application of genetics and genetic engineering to the improvement of agricultural animal health, the development of new animal breeds, and the selective improvement of agricultural animal populations. Includes instruction in genetics, genetic engineering, population genetics, animal health, animal husbandry, and biotechnology. *(Moved from 02.0202)*
- **Animal Genetics.** (Report under 26.0804)
- **Biotechnology.** (Report under 26.1201)
- 01.0903** **Animal Health.** A program that focuses on the application of biological and chemical principles to the study, prevention, and control of diseases in agricultural animal populations. Includes instruction in environmental science, pharmacology, animal population studies, genetics, animal physiology and diet, disease prevention, treatment methodologies, and laboratory and testing procedures. *(Moved from 02.0203)*
- **Microbiological Sciences and Immunology.** (Report under 26.05 Series)
- **Physiology, Pathology, and Related Sciences.** (Report under 26.09 Series)
- **Pharmacology and Toxicology.** (Report under 26.10 Series)
- **Veterinary/Animal Health Technician/Assistant.** (Report under 51.0808)
- **Veterinary Clinical Sciences.** (Report under 51.25 Series)
- 01.0904** **Animal Nutrition.** A program that focuses on the biology and chemistry of proteins, fats, carbohydrates, water, vitamins, and feed additives as related to animal health and the production of improved animal products. Includes instruction in nutrition science, animal health and physiology, biochemistry, cellular and molecular biology, animal husbandry, and food science. *(Moved from 02.0204)*
- **Human Nutrition.** (Report under 19.0504)
- **Nutrition Sciences.** (Report under 30.1901)
- **Animal Physiology.** (Report under 26.0707)
- 01.0905** **Dairy Science.** A program that focuses on the application of biological and chemical principles to the production and management of dairy animals and the production and handling of dairy products. Includes instruction in animal sciences, nutrition sciences, food science and technology, biochemistry, and related aspects of human and animal health and safety. *(Moved from 02.0206)*

- 01.0906** **Livestock Management. (NEW)** A program that focuses on the application of biological and chemical principles to the production and management of livestock animals and the production and handling of meat and other products. Includes instruction in animal sciences, range science, nutrition sciences, food science and technology, biochemistry, and related aspects of human and animal health and safety.
- 01.0907** **Poultry Science.** A program that focuses on the application of biological and chemical principles to the production and management of poultry animals and the production and handling of poultry products. Includes instruction in avian sciences, nutrition sciences, food science and technology, biochemistry, hatchery design, and related aspects of human and animal health and safety. *(Moved from 02.0209)*
- **Entomology.** (Report under 26.0702)
- 01.0999** **Animal Sciences, Other.** Any instructional program in the animal sciences not listed above. *(Moved from 02.0299)*
- 01.10** **Food Science and Technology.** Instructional content for this group of programs is defined in codes 01.1001– 01.1099. *(Moved from 02.03 Series)*
- 01.1001** **Food Science.** A program that focuses on the application of biological, chemical, and physical principles to the study of converting raw agricultural products into processed forms suitable for direct human consumption, and the storage of such products. Includes instruction in applicable aspects of the agricultural sciences, human physiology and nutrition, food chemistry, agricultural products processing, food additives, food preparation and packaging, food storage and shipment, and related aspects of human health and safety including toxicology and pathology. *(Moved from 02.0301)*
- **Foods, Nutrition and Wellness, Studies, General.** (Report under 19.0501)
- **Biotechnology.** (Report under 26.1201)
- 01.1002** **Food Technology and Processing. (NEW)** A program that focuses on the application of chemical, physical, and engineering principles to the development and implementation of manufacturing, packaging, storage, and distribution technologies and processes for food products. Includes instruction in food engineering, food preservation and handling, food preparation, food packaging and display, food storage and shipment, and related equipment and facilities design, operation, and maintenance.
- **Agricultural and Biological Engineering.** (Report under 14.0301)
- **Foodservice Systems Management.** (Report under 19.0505)
- 01.1099** **Food Science and Technology, Other. (NEW)** Any instructional program in food sciences and technology not listed above.
- 01.11** **Plant Sciences.** Instructional content for this group of programs is defined in codes 01.1101– 01.1199. *(Moved from 02.04 Series)*

- **BIOLOGICAL AND BIOMEDICAL SCIENCES.** (Report under 26. Series)
- 01.1101 Plant Sciences, General.** A general program that focuses on the scientific principles that underlie the breeding, cultivation, and production of agricultural plants, and the production, processing, and distribution of agricultural plant products. Includes instruction in the plant sciences, crop cultivation and production, and agricultural and food products processing. *(Moved from 02.0401)*
- **Botany/Plant Biology.** (Report under 26.03 Series)
- **Ecology, Evolution, and Systematics.** (Report under 26.13 Series)
- **Biometry/Biometrics.** (Report under 26.1101)
- **Bioinformatics.** (Report under 26.1103)
- 01.1102 Agronomy and Crop Science.** A program that focuses on the chemical, physical, and biological relationships of crops and the soils nurturing them. Includes instruction in the growth and behavior of agricultural crops, the development of new plant varieties, and the scientific management of soils and nutrients for maximum plant nutrition, health, and productivity. *(Moved from 02.0402)*
- 01.1103 Horticultural Science.** A program that focuses on the scientific principles related to the cultivation of garden and ornamental plants, including fruits, vegetables, flowers, and landscape and nursery crops. Includes instruction in specific types of plants, such as citrus; breeding horticultural varieties; physiology of horticultural species; and the scientific management of horticultural plant development and production through the life cycle. *(Moved from 02.0403)*
- 01.1104 Agricultural and Horticultural Plant Breeding. (NEW)** A program that focuses on the application of genetics and genetic engineering to the improvement of agricultural plant health, the development of new plant varieties, and the selective improvement of agricultural plant populations. Includes instruction in genetics, genetic engineering, population genetics, agronomy, plant protection, and biotechnology.
- **Plant Genetics.** (Report under 26.0805)
- **Biotechnology.** (Report under 26.1201)
- **Pathology/Experimental Pathology.** (See also 26.0910)
- **Physiology, General.** (See also 26.0901)
- **Molecular Physiology.** (Report under 26.0902)
- **Cell Physiology.** (Report under 26.0903)
- 01.1105 Plant Protection and Integrated Pest Management.** A program that focuses on the application of scientific principles to the control of animal and weed infestation of domesticated plant populations, including

agricultural crops; the prevention/reduction of attendant economic loss; and the control of environmental pollution and degradation related to pest infestation and pest control measures. Includes instruction in entomology, applicable animal sciences, plant pathology and physiology, weed science, crop science, and environmental toxicology.
(Moved from 02.0408)

---- **Microbiological Sciences and Immunology.** (Report under 26.05 Series)

---- **Pharmacology and Toxicology.** (Report under 26.10 Series)

01.1106 Range Science and Management. A program that focuses on the scientific study of rangelands, arid regions, grasslands, and other areas of low productivity, as well as the principles of managing such resources for maximum benefit and environmental balance. Includes instruction in livestock management, wildlife biology, plant sciences, ecology, soil science, and hydrology. (Moved from 02.0409)

---- **Wildlife Science and Wildlands Science and Management.**
(Report under 03.0601)

01.1199 Plant Sciences, Other. Any instructional program in plant sciences not listed above. (Moved from 02.0499)

01.12 Soil Sciences. Instructional content for this group of programs is defined in codes 01.1201- 01.1299. (Moved from 02.05 Series)

01.1201 Soil Science and Agronomy, General. A program that generally focuses on the scientific classification of soils, soil properties, and their relationship to agricultural crops. Includes instruction in soil chemistry, soil physics, soil biology, soil fertility, morphogenesis, mineralogy, hydrology, agronomy, and soil conservation and management.
(Moved from 02.0501)

01.1202 Soil Chemistry and Physics. (NEW) A program that focuses on the application of chemical and physical principles to research and analysis concerning the nature and properties of soils and the conservation and management of soils. Includes instruction in soil and fluid mechanics, mineralogy, sedimentology, thermodynamics, geomorphology, environmental systems, analytical methods, and organic and inorganic chemistry.

---- **Hydrology and Water Resources Science.** (Report under 40.0605)

01.1203 Soil Microbiology. (NEW) A program that focuses on application of microbiological theory and methods to the study of the organismic properties of soils, soil-plant and soil-animal interactions, and the biological components and effects of soil management strategies. Includes instruction in microbiology and related biological sciences, applicable animal and plant sciences, soil chemistry and physics as related to biological characteristics, and environmental science.

---- **Microbiological Sciences and Immunology.** (Report under 26.05 Series)

01.1299 **Soil Sciences, Other. (NEW)** Any instructional program in the soil sciences not listed above.

01.99 **Agriculture, Agriculture Operations, and Related Sciences, Other.** Instructional content is defined in code 01.9999.

01.9999 **Agriculture, Agriculture Operations, and Related Sciences, Other.** Any instructional program in agriculture, agricultural operations, and related sciences not listed above.

[02.] **AGRICULTURAL SCIENCES.** (The entire series has been deleted. The programs originally contained in the series have been moved to and should be reported under the appropriate codes in Series 01. and 26.). Refer to the Crosswalk in **table 3** for a specification of how/where these programs should be reported.

03. **NATURAL RESOURCES AND CONSERVATION.** Instructional programs that focus on the various natural resources and conservation fields and prepare individuals for related occupations.

----- **PARKS, RECREATION, LEISURE, AND FITNESS STUDIES.** (Report under 31. Series)

03.01 **Natural Resources Conservation and Research.** Instructional content for this group of programs is defined in codes 03.0101– 03.0199.

03.0101 **Natural Resources/Conservation, General.** A general program that focuses on the studies and activities relating to the natural environment and its conservation, use, and improvement. Includes instruction in subjects such as climate, air, soil, water, land, fish and wildlife, and plant resources; in the basic principles of environmental science and natural resources management; and the recreational and economic uses of renewable and nonrenewable natural resources.

[03.0102] **Environmental Science/Studies.** (Deleted, Report under code 03.0103 or 03.0104)

03.0103 **Environmental Studies. (NEW)** A program that focuses on environment-related issues using scientific, social scientific, or humanistic approaches or a combination. Includes instruction in the basic principles of ecology and environmental science and related subjects such as policy, politics, law, economics, social aspects, planning, pollution control, natural resources, and the interactions of human beings and nature.

03.0104 **Environmental Science. (NEW)** A program that focuses on the application of biological, chemical, and physical principles to the study of the physical environment and the solution of environmental problems, including subjects such as abating or controlling environmental pollution and degradation; the interaction between human society and the natural environment; and natural resources management. Includes instruction in biology, chemistry, physics, geosciences, climatology, statistics, and mathematical modeling.

----- **Conservation Biology.** (Report under 26.1307)

----- **Environmental Biology.** (Report under 26.1305)

- **Ecology.** (Report under 26.1301)
- **Soil Chemistry and Physics.** (Report under 01.1202)
- **Geology/Earth Science.** (Report under 40.0601)
- **Hydrology and Water Resources Science.** (Report under 40.0605)

03.0199 **Natural Resources Conservation and Research, Other. (NEW)** Any instructional program in natural resources conservation and research not listed above.

03.02 **Natural Resources Management and Policy.** Instructional content for this group of programs is defined in codes 03.0201– 03.0299.

03.0201 **Natural Resources Management and Policy.** A program that prepares individuals to plan, develop, manage, and evaluate programs to protect and regulate natural habitats and renewable natural resources. Includes instruction in the principles of wildlife and conservation biology, environmental science, animal population surveying, natural resource economics, management techniques for various habitats, applicable law and policy, administrative and communications skills, and public relations.

----- **Public Policy Analysis.** (Report under 44.0501)

----- **Environmental Health.** (Report under 51.2202)

[03.0203] **Natural Resources Law Enforcement and Protective Services.**
(Deleted, Report under 03.0299)

03.0204 **Natural Resource Economics. (NEW)** A program that focuses on the application of economic concepts and methods to the analysis of issues such as air and water pollution, land use planning, waste disposal, invasive species and pest control, conservation policies, and related environmental problems. Includes instruction in cost-benefit analysis; environmental impact assessment; evaluation and assessment of alternative resource management strategies; policy evaluation and monitoring; and descriptive and analytic tools for studying how environmental developments affect the economic system.

03.0205 **Water, Wetlands, and Marine Resources Management. (NEW)** A program that prepares individuals to apply the principles of marine/aquatic biology, oceanography, natural resource economics, and natural resources management to the development, conservation, and management of freshwater and saltwater environments. Includes instruction in subjects such as wetlands, riverine, lacustrine, coastal, and oceanic water resources; water conservation and use; flood control; pollution control; water supply logistics; wastewater management; aquatic and marine ecology; aquatic and marine life conservation; and the economic and recreational uses of water resources.

03.0206 **Land Use Planning and Management/Development. (NEW)** A program that focuses on how public and/or private land and associated resources can be preserved, developed, and used for maximum social, economic, and environmental benefit. Includes instruction in natural

resources management, natural resource economics, public policy, regional and land use planning, environmental impact assessment, applicable law and regulations, government and politics, principles of business and real estate land use, statistical and analytical tools, computer applications, mapping and report preparation, site analysis, cost analysis, and communications skills.

03.0299 **Natural Resources Management and Policy, Other.** Any instructional program in natural resources management and policy not listed above.

03.03 **Fishing and Fisheries Sciences and Management.** Instructional content is defined in code 03.0301.

03.0301 **Fishing and Fisheries Sciences and Management.** A program that focuses on the scientific study of the husbandry and production of non-domesticated fish and shellfish populations for recreational and commercial purposes and the management of fishing and marine/aquatic product processing to ensure adequate conservation and efficient utilization. Includes instruction in the principles of marine/aquatic biology, freshwater and saltwater ecosystems, water resources, fishing production operations and management, fishing policy and regulation, and the management of recreational and commercial fishing activities.

----- **Aquaculture.** (Report under 01.0303)

----- **Marine Biology and Biological Oceanography.** (Report under 26.1302)

----- **Aquatic Biology/Limnology.** (Report under 26.1304)

----- **Commercial Fishing.** (Report under 49.0303)

[03.04] **Forest Production and Processing.** (Deleted)

[03.0401] **Forest Harvesting and Production Technology/Technician.** (Deleted, Report under 03.0511)

[03.0404] **Forest Products Technology/Technician.** (Deleted, Report under 03.0511)

[03.0405] **Logging/Timber Harvesting.** (Deleted, Report under 03.0599)

[03.0499] **Forest Production and Processing, Other.** (Deleted, Report under 03.0599)

03.05 **Forestry.** Instructional content for this group of programs is defined in codes 03.0501-03.0599.

03.0501 **Forestry, General.** A program that generally prepares individuals to manage and develop forest areas for economic, recreational, and ecological purposes. Includes instruction in forest-related sciences, mapping, statistics, harvesting and production technology, natural resources management and economics, wildlife sciences, administration, and public relations.

- **Range Science and Management.** (Report under 01.1106)
- 03.0502 Forest Sciences and Biology.** A program that focuses on the application of one or more forest-related sciences to the study of environmental factors affecting forests and the growth and management of forest resources. Includes instruction in forest biology, forest hydrology, forest mensuration, silviculture, forest soils, water resources, environmental science, forest resources management, and wood science.
- **Soil Sciences.** (Report under 01.12 Series)
- **Plant Sciences.** (Report under 01.11 Series)
- **Botany.** (Report under 26.03 Series)
- **Ecology.** (Report under 26.1301)
- **Environmental Studies.** (Report under 03.0103)
- **Genetics.** (Report under 26.08 Series)
- 03.0506 Forest Management/Forest Resources Management.** A program that prepares individuals to apply principles of forestry and natural resources management to the administration of forest lands and related resources. Includes instruction in silviculture, forest mensuration, forest protection, inventorying, biometrics, geographic information systems, remote sensing, photogrammetry, forest policy and economics, forest land use planning, fire protection and management, and related administrative skills.
- **Park, Recreation and Leisure Facilities Management.** (Report under 31.0301)
- 03.0508 Urban Forestry. (NEW)** A program that prepares individuals to apply the principles of forestry and related sciences to the development, care, and maintenance of individual trees and forested areas within or close to areas of dense human habitation. Includes instruction in urban environments; effects of pollution on tree species; environmental design and landscaping; urban pest infestation; urban forest management; and applicable policies and regulations.
- 03.0509 Wood Science and Wood Products/Pulp and Paper Technology.** A program that focuses on the application of chemical, physical, and engineering principles to the analysis of the properties and behavior of wood and wood products and the development of processes for converting wood into paper and other products. Includes instruction in wood classification and testing, product development, manufacturing and processing technologies, and the design and development of related equipment and systems.
- **Forest Engineering.** (Report under 14.3401)
- 03.0510 Forest Resources Production and Management. (NEW)** A program that focuses on the application of forestry principles to the production, harvesting, and processing of forest resources and that prepares individuals to perform associated technical and managerial functions.

Includes instruction in forest production and utilization, industrial forestry, agroforestry, transplantation, timber harvesting, selection and identification of trees, processing technologies and systems, equipment operations and maintenance, and related management skills.

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

03.0599 Forestry, Other. Any program in forestry not listed above.

03.06 Wildlife and Wildlands Science and Management. Instructional content is defined in code 03.0601.

03.0601 Wildlife and Wildlands Science and Management. A program that prepares individuals to conserve and manage wilderness areas and the flora and fauna therein, and manage wildlife reservations and zoological facilities for recreational, commercial, and ecological purposes. Includes instruction in wildlife biology; environmental science; natural resources management and policy; outdoor recreation and parks management; the design and operation of natural and artificial wildlife habitats; applicable law and regulations; and related administrative and communications skills.

---- **Range Science and Management.** (Report under 01.1106)

---- **Parks, Recreation and Leisure Facilities Management.** (Report under 31.0301)

---- **Wildlife Biology.** (Report under 26.0709)

---- **Zoology.** (Report under 26.07 Series)

03.99 Natural Resources and Conservation, Other. Instructional content is defined in code 03.9999.

03.9999 Natural Resources and Conservation, Other. Any instructional program in natural resources and conservation not listed above.

04. ARCHITECTURE AND RELATED SERVICES. Instructional programs that prepare individuals for professional practice in the various architecture-related fields and focus on the study of related aesthetic and socioeconomic aspects of the built environment.

04.02 Architecture. Instructional content is defined in code 04.0201.

04.0201 Architecture (BArch, BA/BS, MArch, MA/MS, PhD). A program that prepares individuals for the independent professional practice of architecture and to conduct research in various aspects of the field. Includes instruction in architectural design, history, and theory; building structures and environmental systems; project and site planning;

construction; professional responsibilities and standards; and related cultural, social, economic, and environmental issues.

---- **Architectural Engineering.** (Report under 14.0401)

---- **Construction Engineering.** (Report under 14.3301)

---- **Architectural Engineering Technology/Technician.** (Report under 15.0101)

---- **Construction/Engineering Technology/Technician.** (Report under 15.1001)

---- **Architectural Drafting.** (Report under 15.1303)

04.03 City/Urban, Community and Regional Planning. Instructional content is defined in code 04.0301.

04.0301 City/Urban, Community and Regional Planning. A program that prepares individuals to apply principles of planning, analysis, and architecture to the development and improvement of urban areas and surrounding regions, and to function as professional planners. Includes instruction in principles of architecture; master plan development; service, communications, and transportation systems design; community and commercial development; zoning; land use planning; applied economics; policy analysis; applicable laws and regulations; and professional responsibilities and managerial duties.

---- **Urban Studies/Affairs.** (Report under 45.1201)

04.04 Environmental Design. Instructional content is defined in 04.0401.

04.0401 Environmental Design/Architecture. A program that prepares individuals to design public and private spaces, indoor and outdoor, for leisure, recreational, commercial, and living purposes, and for professional practice as environmental designers and architects. Includes instruction in the design and planning of public and private open spaces and their relationship to buildings and other aspects of the built environment; facilities management; related aspects of interior design and architecture, landscape architecture, and urban planning; and professional responsibilities and standards.

---- **Housing and Human Environments.** (Report under 19.0601)

---- **Interior Design.** (Report under 50.0408)

04.05 Interior Architecture. Instructional content is defined in code 04.0501.

04.0501 Interior Architecture. A program that prepares individuals to apply architectural principles in the design of structural interiors for living, recreational, and business purposes and to function as professional interior architects. Includes instruction in architecture, structural systems design, heating and cooling systems, occupational and safety standards, interior design, specific end-use applications, and professional responsibilities and standards.

----- **Housing and Human Environments.** (Report under 19.0601)

----- **Interior Design.** (Report under 50.0408)

04.06 Landscape Architecture. Instructional content is defined in code 04.0601.

04.0601 Landscape Architecture (BS, BSLA, BLA, MSLA, MLA, PhD). A program that prepares individuals for the independent professional practice of landscape architecture and research in various aspects of the field. Includes instruction in geology and hydrology; soils, groundcovers, and horticultural elements; project and site planning; landscape design, history, and theory; environmental design; applicable law and regulations; and professional responsibilities and standards.

----- **Landscaping and Groundskeeping.** (Report under 01.0605)

----- **Turf/Turfgrass Management.** (Report under 01.0607)

[04.07] Architectural Urban Design and Planning. (Deleted)

[04.0701] Architectural Urban Design and Planning. (Deleted, Report under 04.0301)

04.08 Architectural History and Criticism. (NEW) Instructional content is defined in code 04.0801.

04.0801 Architectural History and Criticism, General. (NEW) A general program that focuses on the aesthetic, technical, and social development of the built environment and the architectural profession from earliest times to the present. Includes instruction in the principles of architecture and related fields; art history; historiography of architecture; architectural theory and criticism; related aspects of the history of technology and social and economic history; and various period, cultural, and stylistic specializations.

----- **Historic Preservation and Conservation.** (Report under 30.1201)

----- **Cultural Resource Management and Policy Analysis.** (Report under 30.1202)

----- **History of Science and Technology.** (Report under 54.0104)

----- **Art History, Criticism and Conservation.** (Report under 50.0703)

04.09 Architectural Technology/Technician. (NEW) Instructional content is defined in code 04.0901.

04.0901 Architectural Technology/Technician. (NEW) A program that prepares individuals to assist architects in developing plans and related documentation and in performing architectural office services. Includes instruction in architectural drafting, computer-assisted drafting and design, construction methods and materials, environmental systems,

building codes and standards, structural principles, cost estimation, planning documentation, visual communication skills, display production, and architectural office management.

04.99 **Architecture and Related Services, Other.** Instructional content is defined in code 04.9999.

04.9999 **Architecture and Related Services, Other.** Any instructional program in architecture and related programs not listed above.

05. AREA, ETHNIC, CULTURAL, AND GENDER STUDIES. Instructional programs that focus on the defined areas, regions, and countries of the world; defined minority groups within and across societies; and issues relevant to collective gender experience.

05.01 Area Studies. Instructional content for this group of programs is defined in codes 05.0101- 05.0199.

----- **FOREIGN LANGUAGES AND LITERATURES AND LINGUISTICS.** (Report under 16. Series)

----- **SOCIAL SCIENCES.** (Report under 45. Series)

----- **HISTORY.** (Report under 54. Series)

05.0101 African Studies. A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of the African Continent, usually with an emphasis on Africa south of the Sahara, and including the African diaspora overseas.

----- **African Languages, Literatures, and Linguistics.** (Report under 16.0201)

05.0102 American/United States Studies/Civilization. A program that focuses on the history, society, politics, culture, and economics of the United States and its Pre-Columbian and colonial predecessors, and including the flow of immigrants from other societies.

----- **American Literature (United States).** (Report under 23.0701)

----- **American History (United States).** (Report under 54.0102)

----- **American Government and Politics (United States).** (Report under 45.1002)

----- **American Indian/Native American Studies.** (Report under 05.0202)

05.0103 Asian Studies/Civilization. A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of the Asian Continent, including the study of the Asian diasporas overseas.

----- **East Asian Languages, Literatures, and Linguistics.** (Report under 16.21 Series)

----- **Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.** (Report under 16.24 Series)

- **South Asian Languages, Literatures, and Linguistics.** (Report under 16.07 Series)
- **Southeast Asian and Australasian/Pacific Languages, Literatures, and Linguistics.** (Report under 16.14 Series)
- **Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics.** (Report under 16.15 Series)
- **Buddhist Studies.** (Report under 38.0202)
- **Islamic Studies.** (Report under 38.0205)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **Asian History.** (Report under 54.0106)
- 05.0104** **East Asian Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of East Asia, defined as including China, Korea, Japan, Mongolia, Taiwan, Tibet, related borderlands and island groups, and including the study of the East Asian diasporas overseas.
- **East Asian Languages, Literatures, and Linguistics.** (Report under 16.03 Series)
- **Buddhist Studies.** (Report under 38.0202)
- **Asian History.** (Report under 54.0106)
- 05.0105** **Central/Middle and Eastern European Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of what is historically known as Central/Middle and Eastern Europe, defined as including Austria, the Balkans, the Baltic States, Belarus, Czech Republic, Hungary, Romania, Poland, Russia, Slovakia, Ukraine, related borderlands and island groups, and migration patterns.
- **Germanic Languages, Literatures, and Linguistics.** (Report under 16.05 Series)
- **Modern Greek Language and Literature.** (Report under 16.0601)
- **Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.** (Report under 16.11 Series)
- **Romance Languages, Literatures, and Linguistics.** (Report under 16.09 Series)
- **South Asian Languages, Literatures, and Linguistics.** (Report under 16.07 Series)
- **Slavic and East European Languages, Literatures, and Linguistics.** (Report under 16.04 Series)
- **Turkic, Ural-Altaic, Caucasian, and Central Asian Languages,**

- Literatures, and Linguistics.** (Report under 16.15 Series)
-
- Holocaust and Related Studies.** (Report under 30.2101)
-
- Islamic Studies.** (Report under 38.0205)
-
- Jewish/Judaic Studies.** (Report under 38.0206)
-
- 05.0106** **European Studies/Civilization.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of the European Continent, including the study of European migration patterns and colonial empires.
-
- Baltic Languages, Literatures, and Linguistics.** (Report under 16.0401)
-
- Celtic Languages, Literatures, and Linguistics.** (Report under 16.1301)
-
- Germanic Languages, Literatures, and Linguistics.** (Report under 16.05 Series)
-
- Modern Greek Language and Literature.** (Report under 16.0601)
-
- Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.** (Report under 16.11 Series)
-
- Romance Languages, Literatures, and Linguistics.** (Report under 16.09 Series)
-
- Slavic and East European Languages, Literatures, and Linguistics.** (Report under 16.04 Series)
-
- South Asian Languages, Literatures, and Linguistics.** (Report under 16.07 Series)
-
- Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics.** (Report under 16.15 Series)
-
- Medieval and Renaissance Studies.** (Report under 30.1301)
-
- Holocaust Studies.** (Report under 30.21 Series)
-
- Islamic Studies.** (Report under 38.0205)
-
- Jewish/Judaic Studies.** (Report under 38.0206)
-
- European History.** (Report under 54.0103)
-
- 05.0107** **Latin American Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the Hispanic peoples of the North and South American Continents outside Canada and the United States, including the study of the Pre-Columbian period and the flow of immigrants from other societies.
-
- American Indian/Native American Languages, Literatures, and Linguistics.** (Report under 16.1001)

- **Romance Languages, Literatures, and Linguistics.** (Report under 16.09 Series)
- 05.0108** **Near and Middle Eastern Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of North Africa, Southwestern Asia, Asia Minor, and the Arabian Peninsula, related borderlands and island groups, and including emigrant and immigrant groups.
- **Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.** (Report under 16.11 Series)
- **Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics.** (Report under 16.15 Series)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Islamic Studies.** (Report under 38.0205)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- 05.0109** **Pacific Area/Pacific Rim Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of Australasia and the Pacific Ocean, related island groups and bordering coastal regions, and including pre- and post-colonial migration patterns.
- **East Asian Languages, Literatures, and Linguistics.** (Report under 16.03 Series)
- **Southeast Asian and Australasian/Pacific Languages, Literatures, and Linguistics.** (Report under 16.14 Series)
- 05.0110** **Russian Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of the Russian Federation and its Soviet, Czarist, and medieval predecessors and related borderlands.
- **Russian Language and Literature.** (Report under 16.0402)
- **Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics.** (Report under 16.15 Series)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Islamic Studies.** (Report under 38.0205)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- **Asian History.** (Report under 54.0106)
- 05.0111** **Scandinavian Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of Scandinavia, defined as Northern Europe including Denmark, Finland, Iceland, Norway, Sweden, related island groups (including Greenland), and borderlands.

- **Scandinavian Languages, Literatures, and Linguistics.** (Report under 16.0502)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **European History.** (Report under 54.0103)
- 05.0112** **South Asian Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of South Asia, defined as including Afghanistan, India, the Maldives, Myanmar (Burma), Pakistan, and Sri Lanka and related borderlands and island groups; and including the study of migration patterns and overseas diasporas.
- **South Asian Languages, Literatures, and Linguistics.** (Report under 16.07 Series)
- **Buddhist Studies.** (Report under 38.0202)
- **Islamic Studies.** (Report under 38.0205)
- **Asian History.** (Report under 54.0106)
- 05.0113** **Southeast Asian Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of Southeast Asia, defined as including Brunei, Cambodia, Indonesia, Laos, Malaysia, The Philippines, Singapore, Thailand, and Viet Nam; related borderlands and island groups; and including the study of migration patterns and overseas diasporas.
- **Southeast Asian and Australasian/Pacific Languages, Literatures, and Linguistics.** (Report under 16.14 Series)
- **Buddhist Studies.** (Report under 38.0202)
- **Islamic Studies.** (Report under 38.0205)
- **Asian History.** (Report under 54.0106)
- 05.0114** **Western European Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of historical Western Europe, defined as including Britain, Ireland, France, the Low Countries, the Iberian Peninsula, Italy, the Western Mediterranean, and related island groups and borderlands.
- **Celtic Languages, Literatures, and Linguistics.** (Report under 16.1301)
- **Germanic Languages, Literatures, and Linguistics.** (Report under 16.05 Series)
- **Romance Languages, Literatures, and Linguistics.** (Report under 16.09 Series)
- **English Literature (British and Commonwealth).** (Report under 23.0801)

- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **Islamic Studies.** (Report under 38.0205)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- 05.0115** **Canadian Studies.** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of Canada and its Pre-Columbian, colonial, and pre-federation predecessors, including immigrant flows and related borderlands and island groups.
- **American Literature (Canadian).** (Report under 23.0702)
- **French Language and Literature.** (Report under 16.0901)
- **Langue et Littératures Françaises/Lettres.** (Report under 55. Series, programs are located in *appendix A*).
- **Canadian History.** (Report under 54.0107)
- **Canadian Government and Politics.** (Report under 45.1003)
- 05.0116** ***Balkans Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples inhabiting the Balkan Peninsula and associated island groups and borderlands, Southern Slavic and non-Slavic, during the medieval, Ottoman, and modern periods.
- **Modern Greek Language and Literature.** (Report under 16.0601)
- **Slavic and Albanian Languages, Literatures, and Linguistics.** (Report under 16.04 Series)
- **Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics.** (Report under 16.15 Series)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **Islamic Studies.** (Report under 38.0205)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- 05.0117** ***Baltic Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples inhabiting the coastlands of the Baltic Sea, including Baltic, Germanic, Scandinavian, and Slavic populations, related borderlands and island groups, and problems of cultural survival and assimilation.
- **Germanic Languages, Literatures, and Linguistics.** (Report under 16.05 Series)

- **Baltic Languages, Literatures, and Linguistics.** (Report under 16.0401)
- **Slavic and Albanian Languages, Literatures, and Linguistics.** (Report under 16.04 Series)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **European History.** (Report under 54.0103)
- 05.0118** ***Slavic Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the Slavic peoples inhabiting Europe, Asia, and in immigrant groups elsewhere, including the study of the emergence and migration patterns of Slavic culture, languages, and populations.
- **Slavic and Albanian Languages, Literatures, and Linguistics.** (Report under 16.04 Series)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **European History.** (Report under 54.0103)
- 05.0119** ***Caribbean Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples inhabiting the major islands and archipelagoes of the Caribbean Sea and related coastal borderlands, including immigration patterns and Pre-Columbian, colonial, and modern societies.
- **American Indian/Native American Languages, Literatures, and Linguistics.** (Report under 16.1001)
- **Romance Languages, Literatures, and Linguistics.** (Report under 16.09 Series)
- 05.0120** ***Ural-Altaic and Central Asian Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples and countries of Inner/Central Asia, including the Turkic and Mongolian inhabitants of the Caspian, Amur, Tien Shan, Baikal, Gobi, Siberian, and Manchurian areas and the historical Silk Road, in terms of their past and present development.
- **East Asian Languages, Literatures, and Linguistics.** (Report under 16.03 Series)
- **Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.** (Report under 16.11 Series)
- **Russian Language and Literature.** (Report under 16.0402)
- **Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics.** (Report under 16.15 Series)

- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Islamic Studies.** (Report under 38.0205)
- **Asian History.** (Report under 54.0106)
- 05.0121** ***Commonwealth Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples and countries comprising components of the historical British Empire and modern British Commonwealth, including migration patterns, shared sociocultural and political features and problems, and contemporary relations.
- **English Literature (British and Commonwealth).** (Report under 23.0801)
- 05.0122** ***Regional Studies (U.S., Canadian, Foreign). (NEW)*** A program that focuses on the defined geographic subregions and subcultures within modern and historical countries and societies. Includes such topics as Acadian Studies, French Canadian and Quebec Studies, Southern (U.S.) Studies, Appalachian (U.S.) Studies, New England Studies, Southwestern Studies, Northern Studies, and others.
- 05.0123** ***Chinese Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of one or more of the peoples of present-day China and its historical predecessors, related borderlands and island groups, and the overseas Chinese diaspora.
- **Chinese Language and Literature.** (Report under 16.0301)
- **Buddhist Studies.** (Report under 38.0202)
- **Asian History.** (Report under 54.0106)
- 05.0124** ***French Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of France, other Francophone countries inside and outside Europe, and the French colonial experience and the associated French minorities around the world.
- **French Language and Literature.** (Report under 16.0901)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- 05.0125** ***German Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of Germany, the neighboring countries of Austria and Switzerland, the German minorities in neighboring European countries, and the historical areas of German influence across Europe and overseas.
- **German Language and Literature.** (Report under 16.0501)
- **Medieval and Renaissance Studies.** (Report under 30.1301)

- **Holocaust Studies.** (Report under 30.2101)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- 05.0126** ***Italian Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of modern Italy and its predecessors on the Italian Peninsula, including overseas migrations of Italian peoples.
- **Italian Language and Literature.** (Report under 16.0902)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- 05.0127** ***Japanese Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of the peoples of Japan, and related island groups and coastal neighbors.
- **Japanese Language and Literature.** (Report under 16.0302)
- **Buddhist Studies.** (Report under 38.0202)
- **Asian History.** (Report under 54.0106)
- 05.0128** ***Korean Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of the peoples of Korea, including related island groups and borderlands.
- **Korean Language and Literature.** (Report under 16.0303)
- **Buddhist Studies.** (Report under 38.0202)
- **Asian History.** (Report under 54.0106)
- 05.0129** ***Polish Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of Poland and the current and historical inhabitants of the Polish lands, including borderlands, from earliest times to the present.
- **Polish Language and Literature.** (Report under 16.0407)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Holocaust Studies.** (Report under 30.2101)
- **Jewish/Judaic Studies.** (Report under 38.0206)
- **European History.** (Report under 54.0103)
- 05.0130** ***Spanish and Iberian Studies. (NEW)*** A program that focuses on the history, society, politics, culture, and economics of the peoples of the

Iberian Peninsula and related island groups and border regions from earliest times to the present, with particular emphasis on the development of Spain and Portugal but including other historical and current cultures.

---- **Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.** (Report under 16.11 Series)

---- **Romance Languages, Literatures, and Linguistics.** (Report under 16.09 Series)

---- **Medieval and Renaissance Studies.** (Report under 30.1301)

---- **Islamic Studies.** (Report under 38.0205)

---- **Jewish/Judaic Studies.** (Report under 38.0206)

---- **European History.** (Report under 54.0103)

05.0131 **Tibetan Studies. (NEW)** A program that focuses on the history, society, politics, culture, and economics of Tibet and its borderlands, with emphasis on both pre-modern and modern Tibet and associated religious and exile movements.

---- **Tibetan Language and Literature.** (Report under 16.0304)

---- **Buddhist Studies.** (Report under 38.0202)

---- **Asian History.** (Report under 54.0106)

05.0132 **Ukraine Studies. (NEW)** A program that focuses on the history, society, politics, culture, and economics of the Ukraine and its inhabitants, and related border regions, from earliest times to the present.

---- **Ukrainian Language and Literature.** (Report under 16.0410)

---- **Medieval and Renaissance Studies.** (Report under 30.1301)

---- **Holocaust Studies.** (Report under 30.2101)

---- **Jewish/Judaic Studies.** (Report under 38.0206)

---- **European History.** (Report under 54.0103)

05.0199 **Area Studies, Other.** Any instructional program in specifically defined area studies not listed above.

05.02 Ethnic, Cultural Minority, and Gender Studies. Instructional content for this group of programs is defined in codes 05.0201- 05.0299.

05.0201 **African-American/Black Studies.** A program that focuses on the history, sociology, politics, culture, and economics of the North American peoples descended from the African diaspora; focusing on the United States, Canada, and the Caribbean, but also including reference to Latin American elements of the diaspora.

05.0202 American Indian/Native American Studies. A program that focuses on the history, sociology, politics, culture, and economics of one or more of the American Indian, Aleut, Inuit, Hawaiian and other native peoples of the Americas from earliest times until the present, with particular emphasis on U.S. and Canadian populations and their problems but including reference to Caribbean and Latin American native peoples.

American Indian/Native American Languages, Literatures, and Linguistics. (Report under 16.1001)

05.0203 Hispanic-American, Puerto Rican, and Mexican-American/Chicano Studies. A program that focuses on the history, sociology, politics, culture, and economics of one or more of the Hispanic American immigrant populations within the U.S. and Canada, including Mexican-American Studies, Cuban American Studies, Puerto Rican Studies, and others.

(05.0204) Islamic Studies. (Moved, Report under 38.0205)

(05.0205) Jewish/Judaic Studies. (Moved, Report under 38.0206)

05.0206 Asian-American Studies. A program that focuses on the history, sociology, politics, culture, and economics of Asian population groups who have immigrated to the United States and Canada, or sought refugee asylum, from the colonial period to the present, and including Chinese-Americans, Japanese-Americans, Korean-Americans, Vietnamese-Americans, Cambodian-Americans, and others.

05.0207 Women's Studies. A program that focuses on the history, sociology, politics, culture, and economics of women, and the development of modern feminism in relation to the roles played by women in different periods and locations in North America and the world. Programs may focus on literature, philosophy, and the arts as much as on social studies and policy.

05.0208 Gay/Lesbian Studies. (NEW) A program that focuses on homosexuality in history, society, politics, and cultural life; usually with an emphasis on the modern emergence of gays and lesbians as a sociocultural minority movement, the identification of social, literary, and artistic themes and the definition of, and public policy and legal issues surrounding the gay and lesbian community.

05.0299 Ethnic, Cultural Minority, and Gender Studies, Other. Any instructional program in ethnic, cultural minority, and gender studies not listed above.

05.99 Area, Ethnic, Cultural, and Gender Studies, Other. Instructional content is defined in code 05.9999.

05.9999 Area, Ethnic, Cultural, and Gender Studies, Other. Any instructional program in area, ethnic, cultural, and gender studies not listed above.

[08.] MARKETING OPERATIONS/MARKETING AND DISTRIBUTION. (The entire series has been *Deleted*, the programs have been moved to and should be reported under the appropriate codes in Series 52). Refer to the Crosswalk in **table 3** for a specification of how/where these programs should be reported.

09. COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS. Instructional programs that focus on how messages in various media are produced, used, and interpreted within and across different contexts, channels, and cultures, and that prepare individuals to apply communication knowledge and skills professionally.

09.01 Communication and Media Studies. Instructional content for this group of programs is defined in codes 09.0101- 09.0199.

---- **ENGLISH LANGUAGE AND LITERATURE/LETTERS.** (Report under 23. Series)

---- **LANGUE et LITTÉRATURES FRANÇAISES/LETTRES.** (Report under 55. Series, programs are located in *appendix A*).

09.0101 Communication Studies/Speech Communication and Rhetoric. A program that focuses on the scientific, humanistic, and critical study of human communication in a variety of formats, media, and contexts. Includes instruction in the theory and practice of interpersonal, group, organizational, professional, and intercultural communication; speaking and listening; verbal and nonverbal interaction; rhetorical theory and criticism; performance studies; argumentation and persuasion; technologically mediated communication; popular culture; and various contextual applications.

09.0102 Mass Communication/Media Studies. A program that focuses on the analysis and criticism of media institutions and media texts, how people experience and understand media content, and the roles of media in producing and transforming culture. Includes instruction in communications regulation, law, and policy; media history; media aesthetics, interpretation, and criticism; the social and cultural effects of mass media; cultural studies; the economics of media industries; visual and media literacy; and the psychology and behavioral aspects of media messages, interpretation, and utilization. (*Moved from 09.0403*)

09.0199 Communication and Media Studies, Other. (NEW) Any instructional program in communication and media studies not listed above.

[09.02] Advertising. (Deleted)

(09.0201) Advertising. (Moved, Report under 09.0903)

09.04 Journalism. Instructional content for this group of programs is defined in codes 09.0401- 09.0499.

09.0401 Journalism. A program that focuses on the theory and practice of gathering, processing, and delivering news and that prepares individuals to be professional print journalists, news editors, and news managers. Includes instruction in news writing and editing; reporting; photojournalism; layout and graphic design; journalism law and policy; professional standards and ethics; research methods; and journalism history and criticism.

09.0402 **Broadcast Journalism.** A program that focuses on the methods and techniques for reporting, producing, and delivering news and news programs via radio, television, and video/film media; and that prepares individuals to be professional broadcast journalists, editors, producers, directors, and managers. Includes instruction in the principles of broadcast technology; broadcast reporting; on- and off-camera and microphone procedures and techniques; program, sound, and video/film editing; program design and production; media law and policy; and professional standards and ethics.

(09.0403) **Mass Communications.** (Moved, Report under 09.0102)

09.0404 **Photojournalism. (NEW)** A program that focuses on the use of still and motion photography in journalism and prepares individuals to function as news photographers and photographic editors. Includes instruction in photography, journalism, studio procedures and techniques, camera and equipment operation and technique, news editing, print and film editing, news scene composition, subject surveillance, media law and policy, news team field operations, and professional standards and ethics.

09.0499 **Journalism, Other. (NEW)** Any instructional program in journalism not listed above.

[09.05] Public Relations and Organizational Communications. (Deleted)

[09.0501] **Public Relations and Organizational Communications.** (Deleted, Report under 09.0902)

09.07 **Radio, Television, and Digital Communication.** Instructional content for this group of programs is defined in codes 09.0701- 09.0799.

----- **COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES.**
(Report under 11. Series)

----- **ENGINEERING.** (Report under 14. Series)

----- **ENGINEERING TECHNOLOGIES/TECHNICIANS.** (Report under 15. Series)

09.0701 **Radio and Television.** A program that focuses on the theories, methods, and techniques used to plan, produce, and distribute audio and video programs and messages, and that prepares individuals to function as staff, producers, directors, and managers of radio and television shows and media organizations. Includes instruction in media aesthetics; planning, scheduling, and production; writing and editing; performing and directing; personnel and facilities management; marketing and distribution; media regulations, law, and policy; and principles of broadcast technology.

----- **Film/Video and Photographic Arts.** (Report under 50.06 Series)

----- **Photographic and Film/Video Technology/Technician.** (Report under 10.0201)

- **Radio and Television Broadcasting Technology/Technician.** (Report under 10.0202)
- **Recording Arts Technology.** (Report under 10.0203)
- 09.0702** ***Digital Communication and Media/Multimedia. (NEW)*** A program that focuses on the development, use, and regulation of new electronic communication technologies using computer applications and that prepares individuals to function as developers and managers of digital communications media. Includes instruction in the principles of computers and telecommunications technologies and processes; design and development of digital communications; marketing and distribution; digital communications regulation, law, and policy; the study of human interaction with, and use of, digital media; and emerging trends and issues.
- **Telecommunications Technology/Technician.** (Report under 15.0305)
- **Telecommunications Management.** (Report under 52.12 Series)
- 09.0799** ***Radio, Television, and Digital Communication, Other. (NEW)*** Any instructional program in radio, television, and digital communications not listed above.
- 09.09** ***Public Relations, Advertising, and Applied Communication. (NEW)*** Instructional content for this group of programs is defined in codes 09.0901- 09.0999.
- 09.0901** ***Organizational Communication, General. (NEW)*** A program that focuses on general communication processes and dynamics within organizations. Includes instruction in the development and maintenance of interpersonal group relations within organizations; decision-making and conflict management; the use of symbols to create and maintain organizational images, missions, and values; power and politics within organizations; human interaction with computer technology; and how communications socializes and supports employees and team members.
- 09.0902** ***Public Relations/Image Management. (NEW)*** A program that focuses on the theories and methods for managing the media image of a business, organization, or individual and the communication process with stakeholders, constituencies, audiences, and the general public; and that prepares individuals to function as public relations assistants, technicians, and managers. Includes instruction in public relations theory; related principles of advertising, marketing, and journalism; message/image design; image management; special event management; media relations; community relations; public affairs; and internal communications.
- 09.0903** ***Advertising.*** A program that focuses on the creation, execution, transmission, and evaluation of commercial messages in various media intended to promote and sell products, services, and brands; and that prepares individuals to function as advertising assistants, technicians, and managers. Includes instruction in advertising theory, marketing strategy, advertising design and production methods, campaign methods

and techniques, media management, related principles of business management, and applicable technical and equipment skills.

(Moved from 09.0201)

---- **Commercial and Advertising Art and Design.** (Report under 50.0402)

---- **Marketing/Marketing Management.** (Report under 52.1401)

---- **Marketing Research.** (Report under 52.1402)

---- **International Marketing.** (Report under 52.1403)

09.0904 ***Political Communication. (NEW)*** A program that focuses on human and media communication in the political process and that prepares individuals to function as members of political and public affairs organizations, political campaign staffs, and related government and media entities. Includes instruction in media effects, political speaking and debating, political advertising and marketing, image management, political journalism, opinion polling, and aspects of print and broadcast media related to the production and distribution of media messages in political settings.

09.0905 ***Health Communication. (NEW)*** A program that focuses on how people, individually and collectively, understand and accommodate to health and illness and the role of communication and media in shaping professional health care messages and public acceptance of these messages. Includes instruction in the development and use of health-related and care-related messages and media; the goals and strategies of health care promotion; relationships, roles, situations, and social structures in the context of health maintenance and promotion; and applications to disease prevention, health advocacy, and communications concerning treatments.

---- **Public Health/Health Care and Promotion.** (Report under 51.2207)

---- **Business/Corporate Communication.** (Report under 52.0501)

---- **Agricultural Communication.** (Report under 01.0802)

---- **Family and Consumer Sciences/Human Sciences Communications.** (Report under 19.0202)

09.0999 ***Public Relations, Advertising, and Applied Communication, Other (NEW)*** Any instructional program in organizational communication, public relations, and advertising not listed above.

09.10 Publishing. (NEW) Instructional content is defined in code 09.1001.

09.1001 ***Publishing. (NEW)*** A program that focuses on the process of managing the creation, publication, and distribution of print and electronic books and other text products and prepares individuals to manage the editorial, technical, and business aspects of publishing operations. Includes instruction in product planning and design, editing, author relations, business and copyright law, publishing industry operations, contracting and purchasing, product marketing, electronic publishing and commerce, history of publishing, and professional standards and ethics.

09.99 **Communication, Journalism, and Related Programs, Other.** Instructional content is defined in code 09.9999.

09.9999 **Communication, Journalism, and Related Programs, Other.** Any instructional program in communication, journalism, and related fields not listed above.

10. COMMUNICATIONS TECHNOLOGIES/TECHNICIANS AND SUPPORT SERVICES.

Instructional programs that prepare individuals to function as equipment operators, support technicians, and operations managers in the film/video, recording, and graphic communications industries.

10.01 **Communications Technology/Technician.** Instructional content is defined in code 10.0105.

[10.0101] **Educational/Instructional Media Technology/Technician.** (Deleted, Report under 13.0501)

(10.0103) **Photographic Technology/Technician.** (Moved, Report under 10.0201)

(10.0104) **Radio and Television Broadcasting Technology/Technician.** (Moved, Report under 10.0202)

10.0105 **Communications Technology/Technician. (NEW)** A program that generally prepares individuals to function as workers and managers within communications industries. Includes instruction in business economics; basic management; principles of interpersonal and mediated communications; radio, television, and digital media production; and related aspects of technology and communications systems.

[10.0199] **Communications Technology/Technician, Other.** (Deleted, Report under 10.9999).

10.02 **Audiovisual Communications Technologies/Technicians. (NEW)** Instructional content for this group of programs is defined in codes 10.0201- 10.0299.

10.0201 **Photographic and Film/Video Technology/Technician and Assistant.** A program that prepares individuals to apply technical knowledge and skills to the operation and maintenance of camera and lighting equipment and the production of finished still, video, and film products under the supervision of photographers, directors, and editors. Includes instruction in equipment setup and maintenance; lighting; power supplies; studio and film set tasks such as camera operator, grip, and best boy; plate and negative handling and development; laboratory procedures; and digital software applications. (*Moved from 10.0103*)

----- **Photojournalism.** (Report under 09.0404)

----- **Commercial Photography.** (Report under 50.0406)

----- **Cinematography and Film/Video Production.** (Report under 50.0602)

- **Photography.** (Report under 50.0605)
- 10.0202** **Radio and Television Broadcasting Technology/Technician.** A program that prepares individuals to apply technical knowledge and skills to the production of radio and television programs, and related operations, under the supervision of broadcast and studio managers, directors, editors, and producers. Includes instruction in sound, lighting, and camera operation and maintenance; power and feed control; studio operations; production preparation; broadcast engineering; related computer applications; and specialized applications such as news, entertainment, live talk, sports, commercials, and taping.
(Moved from 10.0104)
- **Radio and Television.** (Report under 09.0701)
- 10.0203** **Recording Arts Technology/Technician. (NEW)** A program that prepares individuals to apply technical knowledge and skills to the production of sound recordings as finished products or as components of film/video, broadcast, live, or mixed media productions. Includes instruction in sound equipment operation and maintenance; music, dialogue, and sound effects recording; sound track editing; dubbing and mixing; sound engineering; tape, disk, and CD production; digital recording and transmission; amplification and modulation; and working with producers, editors, directors, artists, and production managers.
- **Radio and Television.** (Report under 09.0701)
- **Cinematography and Film/Video Production.** (Report under 50.0602)
- 10.0299** **Audiovisual Communications Technologies/Technicians, Other. (NEW)** Any instructional program in audiovisual communications technologies not listed above.
- 10.03** **Graphic Communications. (NEW)** Instructional content for this group of programs is defined in codes 10.0301- 10.0399.
- **Organizational Communications, Public Relations, and Advertising.** (Report under 09.09 Series)
- **Design and Applied Arts.** (Report under 50.04 Series)
- 10.0301** **Graphic Communications, General. (NEW)** A program that generally prepares individuals to apply technical knowledge and skills in the manufacture and distribution or transmission of graphic communications products. Includes instruction in the prepress, press, and postpress phases of production operations and processes such as offset lithography, flexography, gravure, letterpress, screen printing, foil stamping, digital imaging, and other reproduction methods.
- **Graphic Design.** (Report under 50.0409)
- **Commercial and Advertising Art.** (Report under 50.0402)

- 10.0302** **Printing Management. (NEW)** A program that prepares individuals to apply technical and managerial knowledge and skills to the processes and procedures of managing printing operations from initial design through finished product distribution. Includes instruction in the principles of graphic communications design and production; quality control; printing operations management; computerization; printing plant management; business finance and marketing; logistics and distribution; personnel supervision and leadership; and professional standards in the graphic communications industry.
- 10.0303** **Prepress/Desktop Publishing and Digital Imaging Design.** A program that prepares individuals to apply technical knowledge and skills to the layout, design and typographic arrangement of printed and/or electronic graphic and textual products. Includes instruction in printing and lithographic equipment and operations; computer hardware and software; digital imaging; print preparation; page layout and design; desktop publishing; and applicable principles of graphic design and web page design. *(Moved from 48.0212)*
- **Web Page, Digital/Multimedia and Information Resources Design.**
(Report under 11.0801)
- 10.0304** **Animation, Interactive Technology, Video Graphics and Special Effects. (NEW)** A program that prepares individuals to use computer applications and related visual and sound imaging techniques to manipulate images and information originating as film, video, still photographs, digital copy, soundtracks, and physical objects in order to communicate messages simulating real-world content. Includes instruction in specialized camerawork and equipment operation and maintenance, image capture, computer programming, dubbing, CAD applications, and applications to specific commercial, industrial, and entertainment needs.
- **Computer Graphics.** (Report under 11.0803)
- **Commercial Photography.** (Report under 50.0406)
- **Cinematography and Film/Video Production.** (Report under 50.0602)
- 10.0305** **Graphic and Printing Equipment Operator, General Production.** A program that generally prepares individuals to apply technical knowledge and skills to plan, prepare, and execute a variety of commercial and industrial graphic communications jobs. Includes instruction in the operation and maintenance of mechanical, electronic, and digital graphic, printing, and finishing equipment; and related processes.
(Moved from 48.0201)
- 10.0306** **Platemaker/Imager.** A program that prepares individuals to apply technical knowledge and skills to prepare film, digital data, and surfaces to reproduce printed or graphic images. Includes instruction in platemaking, stripping, camerawork, imposition, digital imaging, computer direct-to-plate and direct-to-press, and related processes. *(Moved from 48.0206)*
- **Printmaking.** (Report under 50.0710)
- 10.0307** **Printing Press Operator.** A program that prepares individuals to apply technical knowledge and skills to set up, operate, and maintain printing presses. *(Moved from 48.0208)*

10.0308 Computer Typography and Composition Equipment Operator. A program that prepares individuals to apply technical knowledge and skills to design and execute page formats, layouts and text composition, and to make typographical selections using computer graphics and other computer-assisted design programs. *(Moved from 48.0211)*

10.0399 Graphic Communications, Other. (NEW) Any instructional program in graphic communications not listed above.

10.99 Communications Technologies/Technicians and Support Services, Other. (NEW) Instructional content is defined in code 10.9999.

10.9999 Communications Technologies/Technicians and Support Services, Other. (NEW) Any instructional program in communications technologies and support services not listed above.

11. COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES. Instructional programs that focus on the computer and information sciences and prepare individuals for various occupations in information technology and computer operations fields.

11.01 Computer and Information Sciences, General . Instructional content is defined in code 11.0101.

11.0101 Computer and Information Sciences, General. A general program that focuses on computing, computer science, and information science and systems as part of a broad and/or interdisciplinary program. Such programs are undifferentiated as to title and content and are not to be confused with specific programs in computer science, information science, or related support services.

11.0102 Artificial Intelligence and Robotics. (NEW) A program that focuses on the symbolic inference, representation, and simulation by computers and software of human learning and reasoning processes and capabilities, and the modeling of human motor control and motions by computer-driven machinery. Includes instruction in computing theory, cybernetics, human factors, natural language processing, robot design, and applicable aspects of engineering, technology, and specific end-use applications.

---- **Robotics Technology/Technician.** (Report under 15.0405)

---- **Computer Hardware Engineering.** (Report under 14.0902)

---- **Computer Hardware Technology/Technician.** (Report under 15.1203)

11.0103 Information Technology. (NEW) A program that focuses on the design of technological information systems, including computing systems, as solutions to business and research data and communications support needs. Includes instruction in the principles of computer hardware and software components, algorithms, databases, telecommunications, user tactics, application testing, and human interface design.

---- **Bioinformatics.** (Report under 26.1103)

----- **Medical Informatics.** (Report under 51.2706)

11.0199 **Computer and Information Sciences, Other. (NEW)** Any instructional program in computer science not listed above.

11.02 Computer Programming. Instructional content for this group programs is defined in codes 11.0201- 11.0299.

11.0201 **Computer Programming/Programmer, General.** A program that focuses on the general writing and implementation of generic and customized programs to drive operating systems and that generally prepares individuals to apply the methods and procedures of software design and programming to software installation and maintenance. Includes instruction in software design, low- and high-level languages and program writing; program customization and linking; prototype testing; troubleshooting; and related aspects of operating systems and networks.

----- **Computer Installation and Repair Technology.** (Report under 47.0104)

11.0202 **Computer Programming, Specific Applications. (NEW)** A program that prepares individuals to apply the knowledge and skills of general computer programming to the solution of specific operational problems and customization requirements presented by individual software users and organizational users. Includes training in specific types of software and its installation and maintenance.

----- **Medical Office Computer Specialist/Assistant.** (Report under 51.0709)

11.0203 **Computer Programming, Vendor/Product Certification. (NEW)** A program that prepares individuals to fulfill the requirements set by vendors for professional qualification as certified installation, customization, and maintenance engineers for specific software products and/or processes. Includes training in specific vendor supported software products and their installation and maintenance.

11.0299 **Computer Programming, Other. (NEW)** Any instructional program in computer programming not listed above.

11.03 Data Processing. Instructional content is defined in code 11.0301.

11.0301 **Data Processing and Data Processing Technology/Technician.** A program that prepares individuals to master and use computer software programs and applications for inputting, verifying, organizing, storing, retrieving, transforming (changing, updating, and deleting), and extracting information. Includes instruction in using various operating system configurations and in types of data entry such as word processing, spreadsheets, calculators, management programs, design programs, database programs, and research programs.

11.04 Information Science/Studies. Instructional content is defined in code 11.0401.

- 11.0401 Information Science/Studies.** A program that focuses on the theory, organization, and process of information collection, transmission, and utilization in traditional and electronic forms. Includes instruction in information classification and organization; information storage and processing; transmission, transfer, and signaling; communications and networking; systems planning and design; human interfacing and use analysis; database development; information policy analysis; and related aspects of hardware, software, economics, social factors, and capacity.
- **Library Science/Librarianship.** (Report under 25.0101)
- **Systems Science and Theory.** (Report under 30.0601)
- **Cognitive Science.** (Report under 30.2501)

11.05 Computer Systems Analysis. Instructional content is defined in code 11.0501.

- 11.0501 Computer Systems Analysis/Analyst.** A program that prepares individuals to apply programming and systems analysis principles to the selection, implementation, and troubleshooting of customized computer and software installations across the life cycle. Includes instruction in computer hardware and software; compilation, composition, execution, and operating systems; low- and high-level languages and language programming; programming and debugging techniques; installation and maintenance testing and documentation; process and data flow analysis; user needs analysis and documentation; cost-benefit analysis; and specification design.
- **Systems Engineering.** (Report under 14.2701)
- **Systems Science and Theory.** (Report under 30.0601)
- **Bioinformatics.** (Report under 26.1103)
- **Medical Informatics.** (Report under 51.2706)

11.06 Data Entry/Microcomputer Applications. (NEW) Instructional content for this group of programs is defined in codes 11.0601- 11.0699.

- 11.0601 Data Entry/Microcomputer Applications, General. (NEW)** A program that generally prepares individuals to perform basic data and text entry using standard and customized software products. Includes instruction in keyboarding skills, personal computer and work station operation, reading draft texts and raw data forms, audio and tape dictation, and various interactive software programs used for tasks such as word processing, spreadsheets, databases, and others.
- **Medical Insurance Coding Specialist/Coder.** (Report under 51.0713)
- 11.0602 Word Processing. (NEW)** A program that prepares individuals to perform text typing, table construction, and document formatting tasks on personal computers at a high rate of accuracy and proficiency. Includes instruction in keyboarding skills, word processor operation, textual draft interpretation, audio and tape dictation, and specific word processing program software.

11.0699 **Data Entry/Microcomputer Applications, Other. (NEW)** Any instructional program in data entry/microcomputer applications not listed above.

11.07 **Computer Science.** Instructional content is defined in code 11.0701.

11.0701 **Computer Science.** A general program that focuses on computers, computing problems and solutions, and the design of computer systems and user interfaces from a scientific perspective. Includes instruction in the principles of computational science, and computing theory; computer hardware design; computer development and programming; and applications to a variety of end-use situations.

----- **Computational Mathematics.** (Report under 27.0303)

----- **Computer Engineering, General.** (Report under 14.0901)

----- **Computer Engineering Technology/Technician.** (Report under 15.1201)

11.08 **Computer Software and Media Applications. (NEW)** Instructional content for this group of programs is defined in codes 11.0801- 11.0899.

----- **Computer Software Engineering.** (Report under 14.0903)

----- **Computer Software Technology/Technician.** (Report under 15.1204)

11.0801 **Web Page, Digital/Multimedia and Information Resources Design. (NEW)** A program that prepares individuals to apply HTML, XML, Javascript, graphics applications, and other authoring tools to the design, editing, and publishing (launching) of documents, images, graphics, sound, and multimedia products on the World Wide Web. Includes instruction in Internet theory; web page standards and policies; elements of web page design; user interfaces; vector tools; special effects; interactive and multimedia components; search engines; navigation; morphing; e-commerce tools; and emerging web technologies.

----- **Publishing.** (Report under 09.1001)

----- **Prepress/Desktop Publishing and Digital Imaging Design.** (Report under 10.0303)

----- **Animation, Interactive Technology, Video Graphics, and Special Effects.** (Report under 10.0304)

11.0802 **Data Modeling/Warehousing and Database Administration. (NEW)** A program that prepares individuals to design and manage the construction of databases and related software programs and applications, including the linking of individual data sets to create complex searchable databases (warehousing) and the use of analytical search tools (mining). Includes instruction in database theory, logic, and semantics; operational and warehouse modeling; dimensionality; attributes and hierarchies; data definition; technical architecture; access and security design; integration; formatting and extraction; data delivery;

index design; implementation problems; planning and budgeting; and client and networking issues.

11.0803 **Computer Graphics. (NEW)** A program that focuses on the software, hardware, and mathematical tools used to represent, display, and manipulate topological, two-, and three-dimensional objects on a computer screen and that prepares individuals to function as computer graphics specialists. Includes instruction in graphics software and systems; digital multimedia; graphic design; graphics devices, processors, and standards; attributes and transformations; projections; surface identification and rendering; color theory and application; and applicable geometry and algorithms.

----- **Animation, Interactive Technology, Video Graphics, and Special Effects.** (Report under 10.0304)

11.0899 **Computer Software and Media Applications, Other. (NEW)** Any instructional program in computer software and media applications not listed above.

11.09 **Computer Systems Networking and Telecommunications. (NEW)** Instructional content is defined in code 11.0901.

11.0901 **Computer Systems Networking and Telecommunications. (NEW)** A program that focuses on the design, implementation, and management of linked systems of computers, peripherals, and associated software to maximize efficiency and productivity, and that prepares individuals to function as network specialists and managers at various levels. Includes instruction in operating systems and applications; systems design and analysis; networking theory and solutions; types of networks; network management and control; network and flow optimization; security; configuring; and troubleshooting.

11.10 **Computer/Information Technology Administration and Management. (NEW)** Instructional content for this group of programs is defined in codes 11.1001-11.1099.

----- **Customer Service Management.** (Report under 52.0207)

----- **Management Information Systems , General.** (Report under 52.1201)

----- **Information Resources Management/CIO Training.** (Report under 52.1206)

11.1001 **System Administration/Administrator. (NEW)** A program that prepares individuals to manage the computer operations and control the system configurations emanating from a specific site or network hub. Includes instruction in computer hardware and software and applications; local area (LAN) and wide area (WAN) networking; principles of information systems security; disk space and traffic load monitoring; data backup; resource allocation; and setup and takedown procedures.

11.1002 **System, Networking, and LAN/WAN Management/Manager. (NEW)** A program that prepares individuals to oversee and regulate the computer system and performance requirements of an entire organization or network of satellite users. Includes instruction in performance balancing; redundancy; local area (LAN) and wide area

(WAN) network management; system migration and upgrading; outage control; problem diagnosis and troubleshooting; and system maintenance budgeting and management.

11.1003 **Computer and Information Systems Security. (NEW)** A program that prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.

11.1004 **Web/Multimedia Management and Webmaster. (NEW)** A program that prepares individuals to develop and maintain web servers and the hosted web pages at one or a group of web sites, and to function as designated webmasters. Includes instruction in computer systems and networks; server installation and maintenance; web page design and editing; information resources management; web policy and procedures; Internet applications of information systems security; user interfacing and usability research; and relevant management and communications skills.

11.1099 **Computer/Information Technology Services Administration and Management, Other. (NEW)** Any instructional program in computer/information technology services administration and management not listed above.

11.99 **Computer and Information Sciences and Support Services, Other.** Instructional content is defined in code 11.9999.

11.9999 **Computer and Information Sciences and Support Services, Other.** Any instructional program in computer and information sciences and support services not listed above.

12. PERSONAL AND CULINARY SERVICES. Instructional programs that prepare individuals to provide professional services related to cosmetology, funeral services, and food preparation and service.

[12.02] Gaming and Sports Officiating Services. (Deleted)

[12.0203] Gaming Attendant/Manager. (Deleted, Report under 12.9999)

[12.0204] Umpire/Referee/Sports Officiating. (Deleted, Report under 12.9999)

[12.0299] Gaming and Sports Officiating Services, Other. (Deleted, Report under 12.9999)

12.03 Funeral Service and Mortuary Science. Instructional content for this group of programs is defined in codes 12.0301- 12.0399.

12.0301 Funeral Service and Mortuary Science, General. A program that generally prepares individuals for careers in the funeral service industry

and for licensure as funeral service directors or morticians. Includes instruction in the basic elements of mortuary science and the business, counseling, and operational aspects of funeral service.

12.0302 **Funeral Direction/Service. (NEW)** A program that prepares individuals for professional licensure as funeral directors and as managers of funeral homes, cemeteries, and related services. Includes instruction in the sociology of death and dying, psychology of grief and grief counseling, history of funeral service, funeral direction, business law, funeral service law, funeral home management, accounting and related computer operations, and funeral services marketing and merchandising.

12.0303 **Mortuary Science and Embalming/Embalmer. (NEW)** A program that prepares individuals for licensure as embalmers and morticians. Includes instruction in pathogenic microbiology, systematic pathology, thanatochemistry, gross anatomy, clinical mortuary science, embalming, restorative art, applicable laws and regulations, and special services such as cremation and preparations required by specific religious communities.

12.0399 **Funeral Service and Mortuary Science, Other. (NEW)** Any instructional program in funeral service and mortuary science not listed above.

12.04 **Cosmetology and Related Personal Grooming Services.** Instructional content for this group of programs is defined in codes 12.0401- 12.0499.

12.0401 **Cosmetology/Cosmetologist, General.** A program that generally prepares individuals to cut, trim, and style scalp, facial, and body hair; apply cosmetic preparations; perform manicures and pedicures; massage the head and extremities; and prepare for practice as licensed cosmetologists in specialized or full-service salons. Includes instruction in hair cutting and styling, manicuring, pedicuring, facial treatments, shampooing, chemical applications, esthetics, shop management, sanitation and safety, customer service, and applicable professional and labor laws and regulations. (*Moved from 12.0403*)

12.0402 **Barbering/Barber.** A program that prepares individuals to shave and trim facial/neck hair and beards, cut and dress hair, fit hairpieces, give facial and scalp massages, apply cosmetic treatments, and to prepare for licensure as professional barbers at various levels. Includes instruction in facial shaving; beard and mustache shaping and trimming; shampooing; hair cutting; hair styles and styling art; facial treatments and massage; chemical applications; hair and scalp anatomy and physiology; hairpiece and toupee fitting; equipment operation; health and safety; customer service; and shop business practices.

----- **Dog/Pet/Animal Grooming.** (Report under 01.0504)

(12.0403) **Cosmetologist.** (*Moved, Report under 12.0401*)

12.0404 **Electrolysis/Electrology and Electrolysis Technician.** A program that prepares individuals to permanently remove hair from the human scalp, face, and body using specialized charged solid needle probes, and to function as licensed electrologists and electrolysis technicians. Includes instruction in direct current electrolysis, alternating current/high frequency

thermolysis, blend/dual modality treatments, equipment theory and operation, safety and sanitation, client evaluation and care, laws and regulations, and business practices.

(12.0405) Massage. (Moved, Report under 51.3501)

12.0406 Make-Up Artist/Specialist. A program that prepares individuals to professionally apply cosmetic makeup preparations and perform complete and specialized appearance makeovers including hairdressing, wig work, masking, temporary prosthesis applications, cosmetic applications, and related costuming for leisure or for professional stage, camera, clinical, or security purposes. Includes instruction in period and contemporary hairstyling and costuming; wig work and hairpiece application; synthetic hair and masks; cosmetic preparations and treatments; makeup artistry; attachment, removal, and camouflaging of prostheses; health and safety; client consultation and care; pre- and post-production operations; set and crew conduct and relations; script, instruction, and prescription interpretation; labor relations; and business practices.

12.0407 Hair Styling/Stylist and Hair Design. (NEW) A program that prepares individuals to shampoo, cut, style, set, and dress the scalp hair of women and/or men, braid hair, apply hair cosmetics and wigs, and prepare for licensure as professional cosmetologists, hairdressers, and barbers at various levels. Includes instruction in hair design theory and concepts, hair cleaning and shampooing, hair coloring, chemical applications and permanent reconstructions, hair anatomy and physiology, scalp diseases and treatments, wig and hairpiece fitting, hair braiding, customer service, shop management, equipment operation, health and safety, and applicable laws and regulations.

12.0408 Facial Treatment Specialist/Facialist. (NEW) A program that prepares individuals to massage and treat the face, neck, and scalp with chemical and cosmetic preparations, and to function as licensed facial specialists in specialized and full service salons. Includes instruction in facial surface anatomy; skin properties; skin decontamination and infection control; facial massage; facial makeup; facial wrapping; selection and application of creams, lotions, oils, and other chemicals and cosmetics; European and other facial techniques; client evaluation and care, applicable laws and regulations, and business practices.

12.0409 Aesthetician/Esthetician and Skin Care Specialist. (NEW) A program that prepares individuals to cleanse, depilate, massage, and beautify the human body and to function as licensed estheticians and skin care specialists. Includes instruction in skin anatomy, physiology, and health; principles of nutrition; decontamination and infection control; health and safety; facial and body massage; body wrapping and spa treatments; temporary hair removal including waxing and tweezing; color and skin analysis; client consultation and care; applicable laws and regulations; business practices; and sometimes related alternative healing regimens.

12.0410 Nail Technician/Specialist and Manicurist. (NEW) A program that prepares individuals to shape fingernails and toenails, remove unwanted skin and blemishes, apply polish and cosmetics to nails, and function as licensed manicurists or nail technicians/specialists. Includes instruction in manicuring theory; skin anatomy; nail growth, irregularities, and diseases; sterilization and sanitation; equipment and table maintenance;

cuticle, blemish, and rough skin removal; nail filing, shaping, and polishing; cream application and extremity massage; nail sculpture and design art; product storage and use; customer service; laws and regulations; and business practices.

12.0411 ***Permanent Cosmetics/Makeup and Tattooing. (NEW)*** A program that prepares individuals to prepare and apply permanent markings, color, and cosmetic products to the face and body for aesthetic or clinical purposes; to remove unwanted markings; and to function as licensed permanent makeup artists and tattooists. Includes instruction in client consultation; sterilization and sanitation; skin anatomy, diseases, and disorders; skin preparation and anesthetics; color theory; machine theory and operation; needle selection; applications such as eyebrows, eyeliners, lips, lipliners, beauty marks, and blemish/mark removal; after care; laws and regulations; and business practices.

12.0412 ***Salon/Beauty Salon Management/Manager. (NEW)*** A program that prepares cosmetologists, hairstylists, and other personal grooming specialists to manage beauty parlors, shops, and full-service or specialized salons and to prepare for licensure as professional salon owners and operators. Includes instruction in cosmetic services marketing and retailing; advertising and promotion; salon management; the cosmetic and salon supply industries; hiring, supervision, and labor relations; applicable business and professional laws and regulations; professional standards and image; and customer service.

12.0413 ***Cosmetology, Barber/Styling, and Nail Instructor. (NEW)*** A program that prepares cosmetologists, barbers, stylists, nail technicians, and other grooming specialists to teach their specializations in licensed and accredited schools of cosmetology and barbering, and to prepare for licensure as instructors. Includes instruction in cosmetology arts and sciences teaching principles; student learning styles; professional curricula development; instructional planning; instructional methods and aids; student counseling and career assistance; test development; and classroom/clinic management.

12.0499 ***Cosmetology and Related Personal Grooming Arts, Other.*** Any instructional program in cosmetology and related personal grooming services not listed above.

12.05 ***Culinary Arts and Related Services.*** Instructional content for this group of programs is defined in codes 12.0500- 12.0599.

----- ***Hospitality Administration/Management.*** (Report under 52.09 Series)

12.0500 ***Cooking and Related Culinary Arts, General. (NEW)*** A program that focuses on the general study of the cooking and related culinary arts, and that may prepare individuals for a variety of jobs within the food service industry. Includes instruction in food preparation; cooking techniques; equipment operation and maintenance; sanitation and safety; communication skills; applicable regulations; and principles of food service management.

12.0501 ***Baking and Pastry Arts/Baker/Pastry Chef.*** A program that prepares individuals to serve as professional bakers and pastry specialists in restaurants or other commercial baking establishments. Includes instruction in bread and pastry making, bread and pastry handling and storage, cake and pastry decorating, baking industry

operations, product packaging and marketing operations, and counter display and service.

- 12.0502 Bartending/Bartender.** A program that prepares individuals to professionally prepare mixed alcoholic and non-alcoholic beverages and related products and manage bars, lounges, and beverage service operations in the hospitality industry. Includes instruction in mixology, oenology, accounting and cash management, inventory and cellar management, bar and lounge management, applicable laws and regulations, customer service, and labor/employment regulations.
- 12.0503 Culinary Arts/Chef Training.** A program that prepares individuals to provide professional chef and related cooking services in restaurants and other commercial food establishments. Includes instruction in recipe and menu planning, preparing and cooking of foods, supervising and training kitchen assistants, the management of food supplies and kitchen resources, aesthetics of food presentation, and familiarity or mastery of a wide variety of cuisines and culinary techniques.
- 12.0504 Restaurant, Culinary, and Catering Management/Manager.** A program that prepares individuals to plan, supervise, and manage food and beverage preparation and service operations, restaurant facilities, and catering services. Includes instruction in food/beverage industry operations, cost control, purchasing and storage, business administration, logistics, personnel management, culinary arts, restaurant and menu planning, executive chef functions, event planning and management, health and safety, insurance, and applicable law and regulations.
- 12.0505 Food Preparation/Professional Cooking/Kitchen Assistant.** A program that prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. Includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.
- 12.0506 Meat Cutting/Meat Cutter.** A program that prepares individuals to receive, cut, and package animal meat products in commercial establishments and to function as licensed meat cutters/butchers. Includes instruction in product recognition for beef, veal, lamb, pork, poultry, and fancy and smoked meats; retail and wholesale cutting and specialty cuts; packaging and counter display; shop safety; meat sanitation, storage and rotation; quality control; meat handling laws and regulations; and customer service.
- 12.0507 Food Service, Waiter/Waitress, and Dining Room Management/Manager.** A program that prepares individuals to serve food to customers in formal or informal settings. Includes instruction in the nutritional, sensory, and functional properties of food and its ingredients; food services principles; table and counter services; dining room operations and procedures; service personnel supervision and management; communication skills; business math; safety and sanitation.
- 12.0508 Institutional Food Workers. (NEW)** A program that prepares individuals in production and service used in governmental, commercial or independently owned institutional food establishments and related food

industry occupations. Includes instruction in selecting, storing, preparing, and serving food and food products; basic nutrition; sanitation, and food safety; the use and care of commercial equipment; serving techniques; and the operation of institutional food establishments.

12.0599 Culinary Arts and Related Services, Other. Any instructional program in culinary arts and related services not listed above.

12.99 Personal and Culinary Services, Other. Instructional content is defined in code 12.9999.

12.9999 Personal and Culinary Services, Other. Any instructional program in personal and culinary services not listed above.

13. EDUCATION. Instructional programs that focus on the theory and practice of learning and teaching, and related research, administrative and support services.

---- **PSYCHOLOGY.** (Report under 42. Series)

---- **SOCIAL SCIENCES.** (Report under 45. Series)

13.01 Education, General. Instructional content is defined in code 13.0101.

13.0101 Education, General. A program that focuses on the general theory and practice of learning and teaching; the basic principles of educational psychology; the art of teaching; the planning and administration of educational activities; school safety and health issues; and the social foundations of education.

13.02 Bilingual, Multilingual, and Multicultural Education. Instructional content for this group of programs is defined in codes 13.0201- 13.0299.

13.0201 Bilingual and Multilingual Education. A program that focuses on the design and provision of teaching and other educational services to bilingual/bicultural children or adults, and/or the design and implementation of educational programs having the goal of producing bilingual/bicultural individuals. Includes preparation to serve as teachers and administrators in bilingual/bicultural education programs.

---- **Teaching English as a Second or Foreign Language/ESL Language Instructor.** (Report under 13.1401)

---- **Teaching French as a Second or Foreign Language.** (Report under 13.1402)

13.0202 Multicultural Education. (NEW) A program that focuses on the design, and implementation of instructional and advising services for culturally diverse learning populations. Includes instruction in cultural diversity, at-risk populations, multilingual and ESL education, program and curriculum design, instructional technology, information resources, LEP and minority education strategies, counseling and communicating with multicultural populations, law and regulations, and applications to specific cultural groups, educational services, and research issues.

13.0203 ***Indian/Native American Education. (NEW)*** A program that focuses on the design and implementation of instructional and advising services for American Indian, Alaska Native, and Hawaiian Native students at various learning levels and that prepares individuals to perform teaching and administrative functions in Tribal/First Nation schools. Includes instruction in the cultural traditions and social patterns, history and politics, learning styles and issues, curriculum design, LEP and minority education strategies, counseling techniques and social issues, rural education services, distance education, adult education techniques, school administration, applicable laws and regulations, and research issues.

13.0299 ***Bilingual, Multilingual, and Multicultural Education, Other. (NEW)*** Any instructional program in bilingual, multilingual, and multicultural Education not listed above.

13.03 Curriculum and Instruction. Instructional content is defined in code 13.0301.

13.0301 **Curriculum and Instruction.** A program that focuses on the curriculum and related instructional processes and tools, and that may prepare individuals to serve as professional curriculum specialists. Includes instruction in curriculum theory, curriculum design and planning, instructional material design and evaluation, curriculum evaluation, and applications to specific subject matter, programs or educational levels.

13.04 Educational Administration and Supervision. Instructional content for this group of programs is defined in codes 13.0401- 13.0499.

13.0401 **Educational Leadership and Administration, General.** A program that focuses on the general principles and techniques of administering a wide variety of schools and other educational organizations and facilities, supervising educational personnel at the school or staff level, and that may prepare individuals as general administrators and supervisors.

13.0402 **Administration of Special Education.** A program that prepares individuals to plan, supervise, and manage programs for exceptional students and their parents. Includes instruction in special education theory and practice, special education program development, evaluation and assessment in special education, state and federal law and regulations, managing individual education plans, problems of low- and high- disability students, mainstreaming, special education curricula, staff management, parent education, communications and community relations, budgeting, and professional standards and ethics.

13.0403 **Adult and Continuing Education Administration.** A program that focuses on the principles and techniques of administering programs and facilities designed to serve the basic education needs of undereducated adults, or the continuing education needs of adults seeking further or specialized instruction, and that prepares individuals to serve as administrators of such programs. Includes instruction in adult education principles, program and facilities planning, personnel management, community and client relations, budgeting and administration, professional standards, and applicable laws and policies.

13.0404 **Educational, Instructional, and Curriculum Supervision.** A program that prepares individuals to supervise instructional and support

personnel at the school building, facility or staff level. Includes instruction in the principles of staffing and organization, the supervision of learning activities, personnel relations, administrative duties related to departmental or unit management, and specific applications to various educational settings and curricula.

- [13.0405] Elementary and Middle and Secondary Education Administration.**
(Deleted, Report under 13.0408 or 13.0409)
- 13.0406 Higher Education/Higher Education Administration.** A program that focuses on the principles and practice of administration in four-year colleges, universities and higher education systems, the study of higher education as an object of applied research, and which may prepare individuals to function as administrators in such settings. Includes instruction in higher education economics and finance; policy and planning studies; curriculum; faculty and labor relations; higher education law; college student services; research on higher education; institutional research; marketing and promotion; and issues of evaluation, accountability and philosophy.
- 13.0407 Community College Education.** A program that focuses on the principles and techniques of administering community and junior colleges and related postsecondary systems, the study of community and junior colleges as objects of applied research, and that may prepare individuals to function as administrators in such settings. Includes instruction in community and junior college finance; policy and planning studies; curriculum; faculty and labor relations; higher education law; student services; research on community and junior colleges; institutional research; marketing and promotion; and issues of evaluation, accountability and philosophy.
- 13.0408 Elementary and Middle School Administration/Principalship. (NEW)**
A program that focuses on educational administration at the elementary and middle school (K-7) levels, and prepares individuals to serve as principals and masters of elementary and middle schools. Includes instruction in elementary and/or middle school education, program and facilities planning, budgeting and administration, public relations, human resources management, childhood and pre-adolescent growth and development, counseling skills, applicable law and regulations, school safety, policy studies, and professional standards and ethics.
- 13.0409 Secondary School Administration/Principalship. (NEW)** A program that focuses on educational administration at the junior high, secondary, or senior high school (7-12) levels, and prepares individuals to serve as principals and masters of secondary schools. Includes instruction in secondary school education, program and facilities planning, budgeting and administration, public relations, human resources management, adolescent growth and development, counseling skills, applicable law and regulations, school safety, policy studies, and professional standards and ethics.
- 13.0410 Urban Education and Leadership. (NEW)** A program that focuses on issues and problems specific to the educational needs of populations and communities located in metropolitan, inner city, and related areas and prepares individuals to provide educational services and administrative leadership in urban contexts. Includes instruction in multicultural education, at-risk studies, urban sociology, multilingual

education, urban studies and planning, human services, health services and nutrition, cross-cultural communication, diversity studies, safety and security, and urban educational administration and leadership.

13.0411 ***Superintendency and Educational System Administration. (NEW)*** A program that focuses on leading and managing multi-school educational systems and school districts, and prepares individuals to serve as systems administrators and district superintendents. Includes instruction in educational administration; education of students at various levels; system planning and budgeting; educational policy; educational law and regulations; public relations; professional standards and ethics; and applications to specific issues, cultural context, and geographic locales.

13.0499 **Educational Administration and Supervision, Other.** Any instructional program in education administration and supervision not listed above.

13.05 **Educational/Instructional Media Design.** Instructional content is defined in code 13.0501.

13.0501 **Educational/Instructional Media Design.** A program that focuses on the principles and techniques of creating instructional products and related educational resources in various formats or combinations such as film, video, recording, text, art, CD-ROM, computer software, virtual reality technology, and three-dimensional objects, and that prepares individuals to function as instructional media designers. Includes instruction in the techniques specific to creating in various media; the behavioral principles applicable to using various media in learning and teaching; the design, testing and production of instructional materials; and the management of educational/instructional media facilities and programs.

13.06 **Educational Assessment, Evaluation, and Research.** Instructional content for this group of programs is defined in codes 13.0601- 13.0699.

13.0601 **Educational Evaluation and Research.** A program that focuses on the principles and procedures for generating information about educational programs, personnel and methods, and the analysis of such information for planning purposes. Includes instruction in evaluation theory, evaluation research design and planning, administering evaluations and related data collection activities, data reporting requirements, data analysis and interpretation, and related economic and policy issues.

13.0603 **Educational Statistics and Research Methods.** A program that focuses on the application of statistics to the analysis and solution of educational research problems, and the development of technical designs for research studies. Includes instruction in mathematical statistics, research design, computer applications, instrument design, research methodologies, and applications to research problems in specific education subjects.

13.0604 **Educational Assessment, Testing, and Measurement.** A program that focuses on the principles and procedures for designing, developing, implementing and evaluating tests and other mechanisms used to measure learning, evaluate student progress, and assess the

performance of specific teaching tools, strategies and curricula. Includes instruction in psychometric measurement, instrument design, test implementation techniques, research evaluation, data reporting requirements, and data analysis and interpretation.

13.0699 Educational Assessment, Evaluation, and Research, Other. Any instructional program in educational evaluation, research and statistics not listed above.

13.07 International and Comparative Education. Instructional content is defined in code 13.0701.

13.0701 International and Comparative Education. A program that focuses on the educational phenomena, practices and institutions within different societies and states in comparative perspective, and the study of international educational issues. Includes instruction in comparative research methods, country- or area-specific studies, crossnational studies of learning and teaching styles, international educational policy and development, and analyses of educational migration patterns and experiences.

(13.08) Educational Psychology. (Moved, Report under 42.18 Series)

(13.0802) Educational Psychology. (Moved, Report under 42.1801)

13.09 Social and Philosophical Foundations of Education. Instructional content is defined in code 13.0901.

13.0901 Social and Philosophical Foundations of Education. A program that focuses on the systematic study of education as a social and cultural institution, and the educational process as an object of humanistic inquiry. Includes instruction in such subjects as the philosophy of education, history of education, educational literature, educational anthropology, sociology of education, economics and politics of education, educational policy studies, and studies of education in relation to specific populations, issues, social phenomena, and types of work.

13.10 Special Education and Teaching. Instructional content for this group of programs is defined in codes 13.1001- 13.1099.

13.1001 Special Education and Teaching, General. A general program that focuses on the design and provision of teaching and other educational services to children or adults with special learning needs or disabilities, and that may prepare individuals to function as special education teachers. Includes instruction in diagnosing learning disabilities, developing individual education plans, teaching and supervising special education students, special education counseling, and applicable laws and policies.

13.1003 Education/Teaching of Individuals with Hearing Impairments Including Deafness. A program that focuses on the design of educational services for children or adults with hearing impairments including deafness which adversely affect their educational performance, and that may prepare individuals to teach such students. Includes

instruction in identifying students with hearing impairments, including deafness, developing individual education plans, teaching and supervising hearing-impaired students, counseling, and applicable laws and policies.

---- **Audiology/Hearing Sciences.** (Report under 51.0202)

---- **Sign Language Interpretation and Translation** (Report under 16.1603)

13.1004 Education/Teaching of the Gifted and Talented. A program that focuses on the design of educational services for children or adults exhibiting exceptional intellectual, psychomotor or artistic talent or potential, or who exhibit exceptional maturity or social leadership talents, and that may prepare individuals to teach such students. Includes instruction in identifying gifted and talented students, developing individual education plans, teaching and supervising gifted and talented students, counseling, and applicable laws and policies.

13.1005 Education/Teaching of Individuals with Emotional Disturbances. A program that focuses on the design of educational services for children or adults with emotional conditions which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying students with emotional disturbances, developing individual education plans, teaching and supervising emotionally disturbed students, counseling, and applicable laws and policies.

13.1006 Education/Teaching of Individuals with Mental Retardation. A program that focuses on the design of educational services for children or adults with mental disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying students with mental retardation, developing individual education plans, teaching and supervising mentally handicapped students, counseling, and applicable laws and policies.

13.1007 Education/Teaching of Individuals with Multiple Disabilities. A program that focuses on the design of educational services for children or adults with multiple disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying students with multiple disabilities, developing individual education plans, teaching and supervising multiple handicapped students, counseling, and applicable laws and policies.

13.1008 Education/Teaching of Individuals with Orthopedic and Other Physical Health Impairments. A program that focuses on the design of educational services for children or adults with orthopedic and other health impairments which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying physically disabled students, developing individual education plans, teaching and supervising students with orthopedic and other health impairments, counseling, and applicable laws and policies.

13.1009 Education/Teaching of Individuals with Vision Impairments Including Blindness. A program that focuses on the design of educational services for children or adults with visual disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying

students with visual impairments, developing individual education plans, teaching and supervising blind or visually handicapped students, counseling, and applicable laws and policies.

13.1011 **Education/Teaching of Individuals with Specific Learning Disabilities.** A program that focuses on the design of educational services for children or adults with specific learning disabilities which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying students with specific learning disabilities, developing individual education plans, teaching and supervising students with specific learning disabilities, counseling, and applicable laws and policies.

13.1012 **Education/Teaching of Individuals with Speech or Language Impairments.** A program that focuses on the study and design of educational services for children or adults with speech and language impairments which adversely affect their educational performance and that may prepare individuals to teach such students. Includes instruction in identifying students with speech and language impairments, developing individual education plans, teaching and supervising students with speech disabilities, counseling, and applicable laws and policies.

----- **Speech-Language Pathology/Pathologist.** (Report under 51.0203)

13.1013 **Education/Teaching of Individuals with Autism.** A program that focuses on the design of educational services for children or adults with autism, and that prepares individuals to teach such students. Includes instruction in identifying students with autism, developing individual education plans, teaching and supervising autistic students, counseling, and applicable laws and policies.

13.1014 **Education/Teaching of Individuals Who are Developmentally Delayed. (NEW)** A program that focuses on the design of educational services for children or adults who exhibit slow social, physical, cognitive, or emotional growth patterns related to age, or a combination of such factors that affect learning, and that prepares individuals to teach such students. Includes instruction in identification of developmental delay patterns, developing individual education plans, teaching and supervising developmentally delayed students, counseling, and applicable laws and policies.

13.1015 **Education/Teaching of Individuals in Early Childhood Special Education Programs. (NEW)** A program that focuses on the design and provision of teaching and other educational services to infant and pre-school age children with special learning needs or disabilities, and that prepares individuals to teach such students. Includes instruction in diagnosing learning disabilities, developing individual education plans, teaching and supervising special education students, special education counseling, and applicable laws and policies.

13.1016 **Education/Teaching of Individuals with Traumatic Brain Injuries. (NEW)** A program that focuses on the design of educational services for children or adults who are surviving and recovering from brain and brain stem injuries affecting their cognitive, perceptive, and motor functions. Includes instruction in neurophysiology and neuropathology; speech, other sensory, and motor pathologies; emotional and cognitive disabilities; physical and occupational rehabilitation techniques;

developing individual education plans, teaching and supervising brain-injured students, counseling, and applicable laws and policies.

13.1099 Special Education and Teaching, Other. Any instructional program in special education not listed above.

13.11 Student Counseling and Personnel Services. Instructional content for this group of programs is defined in codes 13.1101- 13.1199.

13.1101 Counselor Education/School Counseling and Guidance Services.
A program that prepares individuals to apply the theory and principles of guidance and counseling to the provision of support for the personal, social, educational, and vocational development of students, and the organizing of guidance services within elementary, middle and secondary educational institutions. Includes instruction in legal and professional requirements, therapeutic counselor intervention, vocational counseling, and related sociological and psychological foundations.

13.1102 College Student Counseling and Personnel Services. A program that focuses on the organization and provision of counseling, referral, assistance and administrative services to students in postsecondary educational institutions and adult education facilities, and that may prepare individuals to function as professional counselors in such settings. Includes instruction in applicable laws and policies, residential counseling and services, vocational counseling and placement services, remedial skills counseling, and therapeutic counselor intervention.

13.1199 Student Counseling and Personnel Services, Other. (NEW) Any instructional program in student counseling and personnel services not listed above.

13.12 Teacher Education and Professional Development, Specific Levels and Methods. Instructional content for this group of programs is defined in codes 13.1201- 13.1299.

13.1201 Adult and Continuing Education and Teaching. A program that prepares individuals to teach adult students in various settings, including basic and remedial education programs, continuing education programs, and programs designed to develop or upgrade specific employment-related knowledge and skills.

13.1202 Elementary Education and Teaching. A program that prepares individuals to teach students in the elementary grades, which may include kindergarten through grade eight, depending on the school system or state regulations. Includes preparation to teach all elementary education subject matter.

13.1203 Junior High/Intermediate/Middle School Education and Teaching. A program that prepares individuals to teach students in the middle, intermediate or junior high grades, which may include grades four through nine by regulation.

[13.1204 Pre-Elementary/Early Childhood/Kindergarten Teacher Education.
(Deleted, Report under 13.1209 or 13.1210)

- 13.1205** **Secondary Education and Teaching.** A program that prepares individuals to teach students in the secondary grades, which may include grades seven through twelve, depending on the school system or state regulations. May include preparation to teach a comprehensive curriculum or specific subject matter.
- 13.1206** **Teacher Education, Multiple Levels.** A program that prepares individuals to teach students at more than one educational level, such as a combined program in elementary/secondary, early childhood/elementary, elementary/middle school, or junior high/high school teacher education.
- 13.1207** **Montessori Teacher Education. (NEW)** A program that prepares individuals to teach students at various grade levels according to the pedagogical principles and methods developed by Maria Montessori and her followers.
- 13.1208** **Waldorf/Steiner Teacher Education. (NEW)** A program that prepares individuals to teach students at various grade levels according to the pedagogical principles and methods developed by Rudolf Steiner and his followers.
- 13.1209** **Kindergarten/Preschool Education and Teaching. (NEW)** A program that prepares individuals to teach students in formal settings prior to beginning regular elementary school, usually ranging in age from three to six years (or grade one), depending on the school system or state regulations. Includes preparation to teach all relevant subject matter.
- 13.1210** **Early Childhood Education and Teaching. (NEW)** A program that prepares individuals to teach students ranging in age from infancy through eight years (grade three), depending on the school system or state regulations. Includes preparation to teach all relevant subject matter.
- 13.1299** **Teacher Education and Professional Development, Specific Levels and Methods, Other.** Any instructional program in teacher education and professional development not listed above.
- 13.13** **Teacher Education and Professional Development, Specific Subject Areas.**
Instructional content for this group of programs is defined in codes 13.1301– 13.1399.
- 13.1301** **Agricultural Teacher Education.** A program that prepares individuals to teach vocational agricultural programs at various educational levels.
- **Agriculture, General.** (Report under 01.0000)
- 13.1302** **Art Teacher Education.** A program that prepares individuals to teach art and art appreciation programs at various educational levels.
- **Art/Art Studies, General.** (Report under 50.0701)
- 13.1303** **Business Teacher Education.** A program that prepares individuals to teach vocational business programs at various educational levels.

- **BUSINESS MANAGEMENT, MARKETING AND RELATED SUPPORT SERVICES.** (Report under 52. Series)
- 13.1304** **Driver and Safety Teacher Education.** A program that prepares individuals to teach driver and safety education programs at various educational levels.
- 13.1305** **English/Language Arts Teacher Education.** A program that prepares individuals to teach English grammar, composition and literature programs at various educational levels.
- **English Language and Literature, General.** (Report under 23.0101)
- 13.1306** **Foreign Language Teacher Education.** A program that prepares individuals to teach foreign languages programs at various educational levels, other than French, German or Spanish.
- **Foreign Languages and Literatures, General.** (Report under 16.0101)
- 13.1307** **Health Teacher Education.** A program that prepares individuals to teach health education programs at various educational levels.
- **Health and Physical Education, General.** (Report under 31.0501)
- 13.1308** **Family and Consumer Sciences/Home Economics Teacher Education.** A program that prepares individuals to teach vocational home economics programs at various educational levels.
- **FAMILY AND CONSUMER SCIENCES/ HUMAN SCIENCES.** (Report under 19. Series.)
- **Family and Consumer Sciences/Human Sciences, General.** (Report under 19.0101)
- 13.1309** **Technology Teacher Education/Industrial Arts Teacher Education.** A program that prepares individuals to teach technology education/industrial arts programs at various educational levels.
- 13.1310** **Sales and Marketing Operations/Marketing and Distribution Teacher Education.** A program that prepares individuals to teach vocational sales and marketing operations/marketing and distributive education programs at various educational levels.
- **Sales, Merchandising, and Marketing Operations.** (Report under appropriate code in 52. Series)
- 13.1311** **Mathematics Teacher Education.** A program that prepares individuals to teach mathematics programs at various educational levels.
- **MATHEMATICS.** (Report under 27. Series)
- 13.1312** **Music Teacher Education.** A program that prepares individuals to teach music and music appreciation programs at various educational levels.
- **Music.** (Report under 50.09 Series)

- 13.1314 Physical Education Teaching and Coaching.** A program that prepares individuals to teach physical education programs and/or to coach sports at various educational levels.
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- Health and Physical Education, General.** (Report under 31.0501)
- 13.1315 Reading Teacher Education.** A program that prepares individuals to diagnose reading difficulties and to teach reading programs at various educational levels.
- 13.1316 Science Teacher Education/General Science Teacher Education.** A program that prepares individuals to teach general science programs, or a combination of the biological and physical science subject matter areas, at various educational levels.
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- Biological and Physical Sciences.** (Report under 30.0101)
- 13.1317 Social Science Teacher Education.** A program that prepares individuals to teach specific social science subjects and programs at various educational levels.
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- Psychology, General.** (Report under 42.0101)
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- Anthropology.** (Report under 45.0201)
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- Archaeology.** (Report under 45.0301)
-
- Economics, General.** (Report under 45.0601)
-
- Political Science and Government, General.** (Report under 45.1001)
-
- Sociology.** (Report under 45.1101)
- 13.1318 Social Studies Teacher Education.** A program that prepares individuals to teach general social studies programs at various educational levels.
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- Social Sciences, General.** (Report under 45.0101)
- 13.1319 Technical Teacher Education.** A program that prepares individuals to teach specific vocational technical education programs at various educational levels.
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- Forest Production and Processing.** (Report under 03.05 Series)
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- ENGINEERING TECHNOLOGIES/TECHNICIANS.** (Report under 15. Series)
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- SCIENCE TECHNOLOGIES.** (Report under 41. Series)
- 13.1320 Trade and Industrial Teacher Education.** A program that prepares individuals to teach specific vocational trades and industries programs at various educational levels.
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- PERSONAL AND CULINARY SERVICES.** (Report under 12. Series)
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- SECURITY AND PROTECTIVE SERVICES.** (Report under 43. Series)

- **CONSTRUCTION TRADES.** (Report under 46. Series)
- **MECHANICS AND REPAIR TECHNOLOGIES/TECHNICIANS.** (Report under 47. Series)
- **PRECISION PRODUCTION.** (Report under 48. Series)
- **TRANSPORTATION AND MATERIALS MOVING.** (Report under 49. Series)
- **VISUAL AND PERFORMING ARTS.** (Report under 50.Series)
- 13.1321** **Computer Teacher Education.** A program that prepares individuals to teach computer education programs at various educational levels.
- **Computer and Information Sciences, General.** (Report under 11.0101)
- 13.1322** **Biology Teacher Education.** A program that prepares individuals to teach biology programs at various educational levels.
- **Biology/Biological Sciences, General.** (Report under 26.0101)
- 13.1323** **Chemistry Teacher Education.** A program that prepares individuals to teach chemistry programs at various educational levels.
- **Chemistry, General.** (Report under 40.0501)
- 13.1324** **Drama and Dance Teacher Education.** A program that prepares individuals to teach drama and/or dance programs at various educational levels.
- **Dance.** (Report under 50.0301)
- **Drama/Theatre Arts, General.** (Report under 50.0501)
- 13.1325** **French Language Teacher Education.** A program that prepares individuals to teach French language programs at various educational levels.
- **French Language and Literature.** (Report under 16.0901)
- **Teaching French as a Second or Foreign Language.** (Report under 13.1402)
- 13.1326** **German Language Teacher Education.** A program that prepares individuals to teach German language programs at various educational levels.
- **German Language and Literature.** (Report under 16.0501)
- 13.1327** **Health Occupations Teacher Education.** A program that prepares individuals to teach specific vocational health occupations programs at various educational levels.
- **Mental and Social Health Services.** (Report under 51.15 Series)

- **Dental Services.** (Report under 51.06 Series)
- **Health and Medical Administrative Services.** (Report under 51.07 Series)
- **Allied Health and Medical Assisting Services.** (Report under 51.08 Series)
- **Allied Health and Medical Diagnostic and Treatment Services.** (Report under 51.09 Series)
- **Clinical/Medical Laboratory Science & Allied Professions.** (Report under 51.10 Series)
- **Nursing.** (Report under 51.16 Series)
- **Health Aides/Attendants/Orderlies.** (Report under 51.26)
- 13.1328** **History Teacher Education.** A program that prepares individuals to teach history programs at various educational levels.
- **HISTORY.** (Report under 54. Series)
- 13.1329** **Physics Teacher Education.** A program that prepares individuals to teach physics programs at various educational levels.
- **Physics.** (Report under 40.08 Series)
- 13.1330** **Spanish Language Teacher Education.** A program that prepares individuals to teach Spanish language programs at various educational levels.
- **Spanish Language and Literature.** (Report under 16.0905)
- 13.1331** **Speech Teacher Education.** A program that prepares individuals to teach speech and language arts programs at various educational levels.
- **Speech and Rhetorical Studies.** (Report under 23.1001)
- 13.1332** **Geography Teacher Education. (NEW)** A program that prepares individuals to teach geography at various grade levels.
- **Geography.** (Report under 45.0701)
- 13.1333** **Latin Teacher Education. (NEW)** A program that prepares individuals to teach Latin at various grade levels.
- 13.1334** **School Librarian/School Library Media Specialist. (NEW)** A program that prepares individuals to serve as librarians and media specialists in elementary and secondary schools as well as special instructional centers.
- 13.1335** **Psychology Teacher Education. (NEW)** A program that prepares individuals to teach general psychology at the secondary school level.
- **Educational Psychology.** Report under 42.1801

- **Psychology.** Report under 42. Series
(**Note:** programs preparing teachers to teach at the postsecondary level should be reported utilizing the appropriate codes in Series 42 (Psychology programs).
- 13.1399** **Teacher Education and Professional Development, Specific Subject Areas, Other.** Any instructional program in teacher education, specific academic and vocational programs not listed above.
- 13.14** **Teaching English or French as a Second or Foreign Language.** Instructional content for this group of programs is defined in codes 13.1401- 13.1499.
- 13.1401** **Teaching English as a Second or Foreign Language/ESL Language Instructor.** A program that focuses on the principles and practice of teaching English to students who are not proficient in English or who do not speak, read or write English, and that may prepare individuals to function as teachers and administrators in such programs.
- 13.1402** **Teaching French as a Second or Foreign Language. (NEW)** A program study that focuses on the principles and practice of teaching French to students who are not proficient in French or who do not speak, read, or write French, and prepares individuals to serve as teachers and administrators.
- 13.1499** **Teaching English or French as a Second or Foreign Language, Other. (NEW)** Any program in teaching English or French as a second or foreign language not listed above.
- **Bilingual, Multilingual and Multicultural Education.** (Report under 13.0201 or 13.0202)
- 13.15** **Teaching Assistants/Aides.** Instructional content for this group of programs is defined in codes 13.1501- 13.1599.
- 13.1501** **Teacher Assistant/Aide.** A program that prepares individuals to assist a teacher in regular classroom settings or in providing instruction and supervision to special student populations, such as bilingual/bicultural students, special education students, adult learners, and students learning English. Includes instruction in techniques of general classroom supervision, maintaining order, assisting with lessons and carrying out related assignments.
- 13.1502** **Adult Literacy Tutor/Instructor. (NEW)** A program that prepares individuals to serve as instructors and mentors for adults in basic or functional literacy programs in school, institutional, community, and private settings.
- 13.1599** **Teaching Assistants/Aides, Other. (NEW)** Any teaching assistant/aide program not listed above.
- 13.99** **Education, Other.** Instructional content is defined in code 13.9999.
- 13.9999** **Education, Other.** Any instructional program in education not listed above.

14. ENGINEERING. Instructional programs that prepare individuals to apply mathematical and scientific principles to the solution of practical problems.

14.01 Engineering, General. Instructional content is defined in code 14.0101.

----- **MATHEMATICS.** (Report under 27. Series)

----- **PHYSICAL SCIENCES.** (Report under 40. Series)

14.0101 Engineering, General. A program that generally prepares individuals to apply mathematical and scientific principles to solve a wide variety of practical problems in industry, social organization, public works, and commerce.

----- **Engineering Technology, General.** (Report under 15.0000)

14.02 Aerospace, Aeronautical and Astronautical Engineering. Instructional content is defined in code 14.0201.

14.0201 Aerospace, Aeronautical and Astronautical Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of aircraft, space vehicles, and their systems; applied research on flight characteristics; and the development of systems and procedures for the launching, guidance, and control of air and space vehicles.

----- **Aeronautical/Aerospace Engineering Technology/Technician.** (Report under 15.0801)

14.03 Agricultural/Biological Engineering and Bioengineering. Instructional content is defined in code 14.0301.

14.0301 Agricultural/Biological Engineering and Bioengineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems, equipment and facilities used to produce, process and store agricultural products; to improve the productivity of agricultural methods; and to develop improved agricultural biological systems.

----- **Food Science and Technology.** (Report under 01.10 Series)

14.04 Architectural Engineering. Instructional content is defined in code 14.0401.

14.0401 Architectural Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of materials, systems, and methods used to construct and equip buildings intended for human habitation or other purposes.

----- **Architecture.** (Report under 04.02 Series)

----- **Architectural Engineering Technology/Technician.** (Report under 15.0101)

- 14.05 Biomedical/Medical Engineering.** Instructional content is defined in code 14.0501.
- 14.0501 Biomedical/Medical Engineering.** A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of biological and health systems and products such as integrated biological systems, instrumentation, medical information systems, artificial organs and prostheses, and health management and care delivery systems.
- **Biomedical Technology/Technician.** (Report under 15.0401)
- **Environmental Control Technologies/Technicians.** (Report under 15.05 Series)
- **Occupational Safety and Health Technology/Technician.** (Report under 15.0701)
- **Biotechnology.** (Report under 26.1201)
- **Biology Technician/Biotechnology Laboratory Technician.** (Report under 41.0101 Series)
- **HEALTH PROFESSIONS AND RELATED CLINICAL SCIENCES.** (Report under 51.Series)
- 14.06 Ceramic Sciences and Engineering.** Instructional content is defined in code 14.0601.
- 14.0601 Ceramic Sciences and Engineering.** A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of inorganic non-metallic materials, such as porcelains, cements industrial ceramics, ceramic superconductors, abrasive, and related materials and systems.
- 14.07 Chemical Engineering.** Instructional content is defined in code 14.0701.
- 14.0701 Chemical Engineering.** A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems employing chemical processes, such as chemical reactors, kinetic systems, electrochemical systems, energy conservation processes, heat and mass transfer systems, and separation processes; and the applied analysis of chemical problems such as corrosion, particle abrasion, energy loss, pollution, and fluid mechanics.
- **Chemistry.** (Report under 40.05 Series)
- **Chemical Technology/Technician.** (Report under 41.0301)
- 14.08 Civil Engineering.** Instructional content for this group of programs is defined in codes 14.0801-14.0899.
- 14.0801 Civil Engineering, General.** A program that generally prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of structural, load-bearing,

material moving, transportation, water resource, and material control systems; and environmental safety measures.

Civil Engineering/Civil Technology/Technician. (Report under 15.0201)

14.0802 Geotechnical Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for manipulating and controlling surface and subsurface features at or incorporated into structural sites, including earth and rock moving and stabilization, land fills, structural use and environmental stabilization of wastes and by-products, underground construction, and groundwater and hazardous material containment.

14.0803 Structural Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of materials and systems used in building load-bearing structures for various purposes and in different environments, including buildings, roads, rail lines, bridges, dams, conduits, offshore platforms and work stations, and other structural shells; and the analysis of structural problems such as, failure, fabrication, safety, and natural hazards.

Construction Engineering Technology/Technician. (Report under 15.1001)

14.0804 Transportation and Highway Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of total systems for the physical movement of people, materials and information, including general network design and planning, facilities planning, site evaluation, transportation management systems, needs projections and analysis, and analysis of costs.

14.0805 Water Resources Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for collecting, storing, moving, conserving and controlling surface- and groundwater, including water quality control, water cycle management, management of human and industrial water requirements, water delivery, and flood control.

14.0899 Civil Engineering, Other. Any instructional program in civil engineering not listed above.

14.09 Computer Engineering, General. Instructional content for this group of programs is defined in codes 14.0901- 14.0999.

14.0901 Computer Engineering, General. A program that generally prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of computer hardware and software systems and related equipment and facilities; and the analysis of specific problems of computer applications to various tasks.

Computer Science. (Report under 11.0701 Series)

Computer Engineering Technology/Technician. (Report under 15.1201)

- **Computer Technology/Computer Systems Technology.** (Report under 15.1202)
- 14.0902** **Computer Hardware Engineering. (NEW)** A program that prepares individuals to apply mathematical and scientific principles to the design, development, and evaluation of computer hardware and related peripheral equipment. Includes instruction in computer circuit and chip design, circuitry, computer systems design, computer equipment design, computer layout planning, testing procedures, and related computer theory and software topics.
- 14.0903** **Computer Software Engineering. (NEW)** A program that prepares individuals to apply scientific and mathematical principles to the design, analysis, verification, validation, implementation, and maintenance of computer software systems using a variety of computer languages. Includes instruction in discrete mathematics, probability and statistics, computer science, managerial science, and applications to complex computer systems.
- 14.0999** **Computer Engineering, Other. (NEW)** Any instructional program in computer engineering not listed above.
- 14.10** **Electrical, Electronics and Communications Engineering.** Instructional content is defined in code 14.1001
- 14.1001** **Electrical, Electronics and Communications Engineering.** A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of electrical, electronic and related communications systems and their components, including electrical power generation systems; and the analysis of problems such as superconductor, wave propagation, energy storage and retrieval, and reception and amplification.
- **Electrical, Electronic and Communications Engineering Technology/Technician.** (Report under 15.0303)
- 14.11** **Engineering Mechanics.** Instructional content is defined in code 14.1101.
- 14.1101** **Engineering Mechanics.** A program with a general focus on the application of the mathematical and scientific principles of classical mechanics to the analysis and evaluation of the behavior of structures, forces and materials in engineering problems. Includes instruction in statics, kinetics, dynamics, kinematics, celestial mechanics, stress and failure, and electromagnetism.
- 14.12** **Engineering Physics.** Instructional content is defined in code 14.1201.
- 14.1201** **Engineering Physics.** A program with a general focus on the general application of mathematical and scientific principles of physics to the analysis and evaluation of engineering problems. Includes instruction in high- and low-temperature phenomena, computational physics, superconductivity, applied thermodynamics, molecular and particle physics applications, and space science research.

- 14.13 Engineering Science.** Instructional content is defined in code 14.1301.
- 14.1301 Engineering Science.** A program with a general focuses on the general application of various combinations of mathematical and scientific principles to the analysis and evaluation of engineering problems, including applied research in human behavior, statistics, biology, chemistry, the earth and planetary sciences, atmospheric and meteorology, and computer applications.
- 14.14 Environmental/Environmental Health Engineering.** Instructional content is defined in code 14.1401.
- 14.1401 Environmental/Environmental Health Engineering.** A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for controlling contained living environments and for monitoring and controlling factors in the external natural environment, including pollution control, waste and hazardous material disposal, health and safety protection, conservation, life support, and requirements for protection of special materials and related work environments.
- **Environmental Control Technologies.** (Report under 15.05 Series)
- **Environmental Studies.** (Report under 03.0103)
- **Environmental Science.** (Report under 03.0104)
- **Quality Control and Safety Technologies.** (Report under 15.07 Series)
- [14.15] Geological Engineering.** (Deleted)
- [14.1501] Geological Engineering.** (Deleted, Report under code 14.3901)
- [14.16] Geophysical Engineering.** (Deleted)
- [14.1601] Geophysical Engineering.** (Deleted Report under code 14.3901)
- [14.17] Industrial/Manufacturing Engineering.** (Deleted)
- [14.1701] Industrial/Manufacturing Engineering.** (Deleted, Report under code 14.3501 or 14.3601).
- 14.18 Materials Engineering** Instructional content is defined in code 14.1801.
- 14.1801 Materials Engineering.** A program that prepares individuals to apply mathematical and materials science principles to the design, development and operational evaluation of materials and related processes used in manufacturing in a wide variety of settings; the synthesis of new industrial materials, including marrying and bonding composites; analysis of materials requirements and specifications; and related problems of system design dependent on materials factors.

----- **Materials Science.** (Report under 14.3101)

14.19 Mechanical Engineering. Instructional content is defined in code 14.1901.

14.1901 Mechanical Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of physical systems used in manufacturing and end-product systems used for specific uses, including machine tools, jigs and other manufacturing equipment; stationary power units and appliances; engines; self-propelled vehicles; housings and containers; hydraulic and electric systems for controlling movement; and the integration of computers and remote control with operating systems.

14.20 Metallurgical Engineering. Instructional content is defined in code 14.2001.

14.2001 Metallurgical Engineering. A program that prepares individuals to apply mathematical and metallurgical principles to the design, development and operational evaluation of metal components of structural, load-bearing, power, transmission, and moving systems; and the analysis of engineering problems such as stress, creep, failure, alloy behavior, environmental fluctuations, stability, electromagnetic and thermodynamic characteristics, optimal manufacturing processes, and related design considerations.

----- **Metallurgical Technology/Technician.** (Report under 15.0611)

14.21 Mining and Mineral Engineering. Instructional content is defined in code 14.2101.

14.2101 Mining and Mineral Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of mineral extraction, processing and refining systems, including open pit and shaft mines, prospecting and site analysis equipment and instruments, environmental and safety systems, mine equipment and facilities, mineral processing and refining methods and systems, and logistics and communications systems.

----- **Mining Technology/Technician.** (Report under 15.0901)

14.22 Naval Architecture and Marine Engineering. Instructional content is defined in code 14.2201.

14.2201 Naval Architecture and Marine Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of self-propelled, stationary, or towed vessels operating on or under the water, including inland, coastal and ocean environments; and the analysis of related engineering problems such as corrosion, power transfer, pressure, hull efficiency, stress factors, safety and life support, environmental hazards and factors, and specific use requirements.

14.23 Nuclear Engineering. Instructional content is defined in code 14.2301.

14.2301 Nuclear Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for controlling and manipulating nuclear energy, including nuclear power plant design, fission reactor design, fusion reactor design, reactor control and safety systems design, power transfer systems, containment vessels and structures design; and the analysis of related engineering problems such as fission and fusion processes, human and environmental factors, construction, and operational considerations.

----- **Nuclear Physics.** (Report under 40.0806)

----- **Nuclear/Nuclear Power Technology/Technician.** (Report under 41.0205)

14.24 Ocean Engineering. Instructional content is defined in code 14.2401

14.2401 Ocean Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems to monitor, control, manipulate and operate within coastal or ocean environments, such as underwater platforms, flood control systems, dikes, hydroelectric power systems, tide and current control and warning systems, and communications equipment; the planning and design of total systems for working and functioning in water or underwater environments; and the analysis of related engineering problems such as the action of water properties and behavior on physical systems and people, tidal forces, current movements, and wave motion.

----- **Oceanography.** (Report under 40.0607)

14.25 Petroleum Engineering. Instructional content is defined in code 14.2501.

14.2501 Petroleum Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems for locating, extracting, processing and refining crude petroleum and natural gas, including prospecting instruments and equipment, mining and drilling systems, processing and refining systems and facilities, storage facilities, transportation systems, and related environmental and safety systems.

----- **Petroleum Technology/Technician.** (Report under 15.0903)

14.27 Systems Engineering. Instructional content is defined in code 14.2701.

14.2701 Systems Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of total systems solutions to a wide variety of engineering problems, including the integration of human, physical, energy, communications, management, and information requirements as needed, and the application of requisite analytical methods to specific situations.

----- **Computer Science.** (Report under 11.0701 Series)

----- **Systems Science and Theory.** (Report under 30.0601)

14.28 Textile Sciences and Engineering. Instructional content is defined in code 14.2801.

14.2801 Textile Sciences and Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of systems to test and manufacture fibers and fiber products, both synthetic and natural; to develop new and improved fibers, textiles and their uses; and to the analysis of related engineering problems such as structural factors, molecular synthesis, chemical manufacturing, weaves, strength and stress, useful life, dyes, and applications to composite systems.

[14.29] **Engineering Design.** (Deleted)

[14.2901] **Engineering Design.** (Deleted, Report under 14.9999)

[14.30] **Engineering/Industrial Management.** (Deleted)

(14.3001) **Engineering/Industrial Management.** (Moved, Report under 15.1501)

14.31 Materials Science. Instructional content is defined in code 14.3101.

14.3101 Materials Science. A program that focuses on the general application of mathematical and scientific principles to the analysis and evaluation of the characteristics and behavior of solids, including internal structure, chemical properties, transport and energy flow properties, thermodynamics of solids, stress and failure factors, chemical transformation states and processes, compound materials, and research on industrial applications of specific materials.

----- **Materials Engineering.** (Report under 14.1801)

14.32 Polymer/Plastics Engineering. Instructional content is defined in code 14.3201.

14.3201 Polymer/Plastics Engineering. A program that prepares individuals to apply mathematical and scientific principles to the design, development and operational evaluation of synthesized macromolecular compounds and their application to specific engineering uses, including the development of industrial materials with tailored properties, the design of lightweight structural components, the use of liquid or solid polymers, and the analysis and control of polymerization processes.

----- **Plastics Engineering Technology/Technician.** (Report under 15.0607)

----- **Polymer Chemistry.** (Report under 40.0507)

14.33 Construction Engineering. (NEW) Instructional content is defined in code 14.3301.

- 14.3301** **Construction Engineering. (NEW)** A program that prepares individuals to apply scientific, mathematical, and management principles to the planning, design, and building of facilities and structures. Includes instruction in civil engineering, structural principles, site analysis, computer-assisted design, geology, evaluation and testing, materials, contracting, project management, graphic communications, and applicable laws and regulations.
- 14.34** **Forest Engineering. (NEW)** Instructional content is defined in code 14.3401.
- 14.3401** **Forest Engineering. (NEW)** A program that prepares individuals to apply scientific, mathematical, and forestry principles to the design of mechanical devices and processes for efficient forest management, timber production and related forest logistics systems. Includes instruction in forest products processing, forest management, forest harvesting, timber structure design, production analysis, road and bridge construction, vehicle adaptation and design, and harvesting equipment design.
- 14.35** **Industrial Engineering. (NEW)** Instructional content is defined in code 14.3501.
- 14.3501** **Industrial Engineering. (NEW)** A program that prepares individuals to apply scientific and mathematical principles to the design, improvement, and installation of integrated systems of people, material, information, and energy. Includes instruction in applied mathematics, physical sciences, the social sciences, engineering analysis, systems design, computer applications, and forecasting and evaluation methodology.
- **Industrial Technology/Technician.** (Report under 15.0612)
- 14.36** **Manufacturing Engineering. (NEW)** Instructional content is defined in code 14.3601.
- 14.3601** **Manufacturing Engineering. (NEW)** A program that prepares individuals to apply scientific and mathematical principles to the design, development, and implementation of manufacturing systems. Includes instruction in materials science and engineering, manufacturing processes, process engineering, assembly and product engineering, manufacturing systems design, and manufacturing competitiveness.
- 14.37** **Operations Research. (NEW)** Instructional content is defined in code 14.3701.
- 14.3701** **Operations Research.** A program that focuses on the development and application of complex mathematical or simulation models to solve problems involving operational systems, where the system concerned is subject to human intervention. Includes instruction in advanced multivariate analysis, application of judgment and statistical tests, optimization theory and techniques, resource allocation theory, mathematical modeling, control theory, statistical analysis, and applications to specific research problems. (*Moved from 27.0302*)
- 14.38** **Surveying Engineering. (NEW)** Instructional content is defined in code 14.3801.

14.3801 **Surveying Engineering. (NEW)** A program that prepares individuals to apply scientific and mathematical principles to the determination of the location, elevations, and alignment of natural and manmade topographic features. Includes instruction in property line location, surveying, surface measurement, aerial and terrestrial photogrammetry, remote sensing, satellite imagery, global positioning systems, computer applications, and photographic data processing.

14.39 **Geological/Geophysical Engineering. (NEW)** Instructional content is defined in code 14.3901.

14.3901 **Geological/Geophysical Engineering. (NEW)** A program that prepares individuals to apply mathematical and geological principles to the analysis and evaluation of engineering problems, including the geological evaluation of construction sites, the analysis of geological forces acting on structures and systems, the analysis of potential natural resource recovery sites, and applied research on geological phenomena.

----- **Geology/Earth Science.** (Report under 40.0601)

----- **Geophysics and Seismology.** (Report under 40.0603)

14.99 **Engineering, Other.** Instructional content is defined in code 14.9999.

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

15. **ENGINEERING TECHNOLOGIES/TECHNICIANS.** Instructional programs that prepare individuals to apply basic engineering principles and technical skills in support of engineering and related projects.

----- **ENGINEERING.** (Report under 14. Series)

15.00 **Engineering Technology, General. (NEW)** Instructional content is defined in code 15.0000.

15.0000 **Engineering Technology, General.** A program that generally prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in a wide variety of projects. Includes instruction in various engineering support functions for research, production, and operations, and applications to specific engineering specialties. (*Moved from 15.1101*)

15.01 Architectural Engineering Technologies/Technicians. Instructional content is defined in code 15.0101.

15.0101 Architectural Engineering Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of architects, engineers and planners engaged in designing and developing buildings, urban complexes, and related systems. Includes instruction in design testing procedures, building site analysis, model building and computer graphics, engineering drawing, structural systems testing, analysis of prototype mechanical and interior systems, test equipment operation and maintenance, and report preparation.

Architectural Engineering. (Report under 14.0401)

15.02 Civil Engineering Technologies/Technicians. Instructional content is defined in code 15.0201.

15.0201 Civil Engineering Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of civil engineers engaged in designing and executing public works projects such as highways, dams, bridges, tunnels and other facilities. Includes instruction in site analysis, structural testing procedures, field and laboratory testing procedures, plan and specification preparation, test equipment operation and maintenance, and report preparation.

Civil Engineering. (Report under 14.08 Series)

15.03 Electrical Engineering Technologies/Technicians. Instructional content for this group of programs is defined in codes 15.0303 - 15.0399.

(15.0301) Computer Engineering Technology/Technician. (Moved, Report under 15.1201).

15.0303 Electrical, Electronic and Communications Engineering Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of electrical, electronics and communication engineers. Includes instruction in electrical circuitry, prototype development and testing; systems analysis and testing, systems maintenance, instrument calibration, and report preparation.

Electrical, Electronics and Communications Engineering. (Report under 14.1001)

15.0304 Laser and Optical Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using lasers and other optical for commercial or research purposes. Includes instruction in laser and optical principles, testing and maintenance procedures, safety precautions, specific applications to various tasks, and report preparation.

15.0305 Telecommunications Technology/Technician. (NEW) A program that prepares individuals to apply basic engineering principles and technical

skills to help design and implement telecommunications systems. Includes instruction in communications protocol, data networking, digital compression algorithms, digital signal processing, Internet access, object-oriented and relational databases, and programming languages.

15.0399 Electrical and Electronic Engineering Technologies/Technicians, Other. Any instructional program in electrical and electronic engineering-related technologies not listed above.

15.04 Electromechanical Instrumentation and Maintenance Technologies/Technicians. Instructional content for this group of programs is defined in codes 15.0401- 15.0499.

15.0401 Biomedical Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing biological or medical systems and products. Includes instruction in instrument calibration, design and installation testing, system safety and maintenance procedures, procurement and installation procedures, and report preparation.

[15.0402] Computer Maintenance Technology/Technician. (Deleted, Report under 15.1202)

15.0403 Electromechanical Technology/Electromechanical Engineering Technology. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing and testing automated, servomechanical, and other electromechanical systems. Includes instruction in prototype testing, manufacturing and operational testing, systems analysis and maintenance procedures, and report preparation.

15.0404 Instrumentation Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in developing control and measurement systems and procedures. Includes instruction in instrumentation design and maintenance, calibration, design and production testing and scheduling, automated equipment functions, applications to specific industrial tasks, and report preparation. (*Moved from 47.0401*)

15.0405 Robotics Technology/Technician. A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using robots. Includes instruction in the principles of robotics, design and operational testing, system maintenance and repair procedures, robot computer systems and control language, specific system types and applications to specific industrial tasks, and report preparation.

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

15.05 Environmental Control Technologies/Technicians. Instructional content for this group of programs is defined in codes 15.0501- 15.0599.

- 15.0501 Heating, Air Conditioning and Refrigeration Technology/Technician (ACH/ACR/ACHR/HRAC/HVAC/AC Technology).** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using air conditioning, refrigeration, and heating systems. Includes instruction in principles of heating and cooling technology, design and operational testing, inspection and maintenance procedures, installation and operation procedures, and report preparation.
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- Heating, Air Conditioning and Refrigeration Maintenance Technology/Technician.** (Report under 47.0201)
- 15.0503 Energy Management and Systems Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing energy-efficient systems or monitoring energy use. Includes instruction in principles of energy conservation, instrumentation calibration, monitoring systems and test procedures, energy loss inspection procedures, energy conservation techniques, and report preparation.
- 15.0505 Solar Energy Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing solar-powered energy systems. Includes instruction in solar energy principles, energy storage and transfer technologies, testing and inspection procedures, system maintenance procedures, and report preparation.
- 15.0506 Water Quality and Wastewater Treatment Management and Recycling Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using water storage, waterpower, and wastewater treatment systems. Includes instruction in water storage, power and/or treatment systems and equipment; testing and inspection procedures; system maintenance procedures; and report preparation.
- 15.0507 Environmental Engineering Technology/Environmental Technology.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using indoor and outdoor environmental pollution control systems. Includes instruction in environmental safety principles, testing and sampling procedures, laboratory techniques, instrumentation calibration, safety and protection procedures, equipment maintenance, and report preparation.
- 15.0508 Hazardous Materials Management and Waste Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in identifying and disposing of hazardous materials. Includes instruction in environmental safety principles, biohazard identification, testing and sampling procedures, laboratory techniques, instrumentation calibration, hazardous waste disposal procedures and systems, safety and protection procedures, equipment maintenance, and report preparation.

- 15.0599 Environmental Control Technologies/Technicians, Other.** Any instructional program in environmental control technologies not listed above.
- 15.06 Industrial Production Technologies/Technicians.** Instructional content for this group of programs is defined in codes 15.0607- 15.0699.
- [15.0603] Industrial/Manufacturing Technology/Technician.** (Deleted, Report under code 15.0612 or 15.0613)
- 15.0607 Plastics Engineering Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using industrial polymers. Includes instruction in the principles of macromolecular chemistry, polymerization and plastic manufacturing processes and equipment, design and operational testing procedures, equipment maintenance and repair procedures, safety procedures, applications to specific products, and report preparation.
- 15.0611 Metallurgical Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and metallurgists engaged in developing and using industrial metals and manufacturing processes. Includes instruction in principles of metallurgy, related manufacturing systems, laboratory techniques, testing and inspection procedures, instrument calibration, system and equipment maintenance and repair, applications to specific processes, and report preparation.
- 15.0612 Industrial Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills in support of industrial engineers and managers. Includes instruction in optimization theory, human factors, organizational behavior, industrial processes, industrial planning procedures, computer applications, and report and presentation preparation.
- 15.0613 Manufacturing Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills to the identification and resolution of production problems in the manufacture of products. Includes instruction in machine operations, production line operations, engineering analysis, systems analysis, instrumentation, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.
- 15.0699 Industrial Production Technologies/Technicians, Other.** Any instructional program in industrial production technologies not listed above.
- 15.07 Quality Control and Safety Technologies/Technicians.** Instructional content for this group of programs is defined in codes 15.0701- 15.0799.
- 15.0701 Occupational Safety and Health Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in maintaining job-related health and safety standards. Includes instruction in safety engineering principles, inspection and monitoring

procedures, testing and sampling procedures, laboratory techniques, applications to specific work environments, and report preparation.

15.0702 **Quality Control Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in maintaining consistent manufacturing and construction standards. Includes instruction in quality control systems management principles, technical standards applicable to specific engineering and manufacturing projects, testing procedures, inspection procedures, related instrumentation and equipment operation and maintenance, and report preparation.

15.0703 **Industrial Safety Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills to assist engineers and other professionals in implementing and enforcing industrial safety standards. Includes instruction in industrial processes, industrial hygiene, toxicology, ergonomics, system and process safety, safety performance measurement, human factors, human behavior, and applicable law and regulations.

15.0704 **Hazardous Materials Information Systems Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills to assist engineers and other professionals in implementing, monitoring, and enforcing hazardous materials management and removal. Includes instruction in environmental science, environmental health, human behavior, economics, management science, information systems and applications, and communication skills.

15.0799 **Quality Control and Safety Technologies/Technicians, Other.** Any instructional program in quality control and safety technologies not listed above.

15.08 **Mechanical Engineering Related Technologies/Technicians.** Instructional content for this group of programs is defined in codes 15.0801- 15.0899.

15.0801 **Aeronautical/Aerospace Engineering Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing aircraft, spacecraft and their systems. Includes instruction in aircraft/spacecraft systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.

----- **Avionics Maintenance Technology/Technician.** (Report under 47.0609)

15.0803 **Automotive Engineering Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing self-propelled ground vehicles and their systems. Includes instruction in vehicular systems technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation.

- **Automobile/Automotive Mechanics Technology/Technician.** (Report under 47.0604)
- 15.0805 Mechanical Engineering/Mechanical Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers engaged in the design and development phases of a wide variety of projects involving mechanical systems. Includes instruction in principles of mechanics, applications to specific engineering systems, design testing procedures, prototype and operational testing and inspection procedures, manufacturing system-testing procedures, test equipment operation and maintenance, and report preparation.
- 15.0899 Mechanical Engineering Related Technologies/Technicians, Other.** Any instructional program in mechanical engineering-related technologies not listed above.
- 15.09 Mining and Petroleum Technologies/Technicians.** Instructional content for this group of programs is defined in codes 15.0901- 15.0999.
- 15.0901 Mining Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development and operation of mines and related mineral processing facilities. Includes instruction in principles of mineral extraction and related geology, mineral field mapping and site analysis, testing and sampling methods, instrument calibration, assay analysis, test equipment operation and maintenance, mine environment and safety monitoring procedures, mine inspection procedures, and report preparation.
- 15.0903 Petroleum Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in the development and operation of oil and natural gas extraction and processing facilities. Includes instruction in principles of petroleum extraction and related geology, petroleum field mapping and site analysis, testing and sampling methods, instrument calibration, laboratory analysis, test equipment operation and maintenance, environment and safety monitoring procedures for oil/gas fields and facilities, facility inspection procedures, and report preparation.
- 15.0999 Mining and Petroleum Technologies/Technicians, Other.** Any instructional program in mining and petroleum engineering technologies not listed above.

- 15.10 Construction Engineering Technologies.** Instructional content is defined in code 15.1001.
- 15.1001 Construction Engineering Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers, engineering contractors and other professionals engaged in the construction of buildings and related structures. Includes instruction in basic structural engineering principles and construction techniques, building site inspection, site supervision, construction personnel supervision, plan and specification interpretation, supply logistics and procurement, applicable building codes, and report preparation.
- **Architectural Engineering Technology.** (Report under 15.0101)
- **Building/Home Construction Inspection/Inspector.** (Report under 46.0403)
- 15.11 Engineering-Related Technologies.** Instructional content is defined in codes 15.1102 – 15.1199.
- (15.1101) Engineering Technology/Technician, General.** (Moved, Report under 15.0000)
- 15.1102 Surveying Technology/Surveying.** A program that prepares individuals to apply mathematical and scientific principles to the delineation, determination, planning and positioning of land tracts, land and water boundaries, land contours and features; and the preparation of related maps, charts and reports. Includes instruction in applied geodesy, computer graphics, photointerpretation, plane and geodetic surveying, mensuration, traversing, survey equipment operation and maintenance, instrument calibration, and basic cartography.
- 15.1103 Hydraulics and Fluid Power Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing and using fluid power and transportation systems. Includes instruction in fluid mechanics and hydraulics principles, fluid power systems, pipeline and pumping systems, design and operational testing, inspection and maintenance procedures, related instrumentation, and report preparation.
- 15.1199 Engineering-Related Technologies, Other. (NEW)** Any programs in engineering-related technologies and technicians not listed above.
- 15.12 Computer Engineering Technologies/Technicians. (NEW)** Instructional content for this group of programs is defined in codes 15.1201- 15.1299.
- 15.1201 Computer Engineering Technology/Technician.** A program that prepares individuals to apply basic engineering principles and technical skills in support of computer engineers engaged in designing and developing computer systems and installations. Includes instruction in computer electronics and programming, prototype development and testing, systems installation and testing, solid state and microminiature

circuitry, peripheral equipment, and report preparation.
(Moved from 15.0301)

15.1202 **Computer Technology/Computer Systems Technology. (NEW)**
A program that prepares individuals to apply basic engineering principles and technical skills in support of professionals who use computer systems. Includes instruction in basic computer design and architecture, programming, problems of specific computer applications, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair, and report preparation.

Computer Installation and Repair Technology/Technician.
(Report under 47.0104)

15.1203 **Computer Hardware Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills to support engineers in designing computer hardware and peripheral systems. Includes instruction in computer systems design, computer architecture, computer electronics, processors, peripherals, testing equipment, and computer manufacturing processes.

15.1204 **Computer Software Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering principles and technical skills to support engineers in developing, implementing, and evaluation computer software and program applications. Includes instruction in computer programming, programming languages, databases, user interfaces, networking and warehousing, encryption and security, software testing and evaluation, and customization.

15.1299 **Computer Engineering Technologies/Technicians, Other. (NEW)**
Any instructional program in computer engineering technologies not listed above.

15.13 **Drafting/Design Engineering Technologies/Technicians. (NEW)** Instructional content for this group of programs is defined in codes 15.1301- 15.1399.

15.1301 **Drafting and Design Technology/Technician, General.** A program that prepares individuals to generally apply technical skills to create working drawings and computer simulations for a variety of applications. Includes instruction in specification interpretation, dimensioning techniques, drafting calculations, material estimation, technical communications, computer applications, and interpersonal communications. (Moved from 48.0101)

15.1302 **CAD/CADD Drafting and/or Design Technology/Technician. (NEW)**
A program that prepares individuals to apply technical skills and advanced computer software and hardware to the creation of graphic representations and simulations in support of engineering projects. Includes instruction in engineering graphics, two-dimensional and three-dimensional engineering design, solids modeling, engineering animation, computer-aided drafting (CAD), computer-aided design (CADD), and auto-CAD techniques.

15.1303 **Architectural Drafting and Architectural CAD/CADD.** A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations for architectural and related construction projects. Includes instruction in basic construction and

structural design, architectural rendering, architectural-aided drafting (CAD), layout and designs, architectural blueprint interpretation, building materials, and basic structural wiring diagramming.
(Moved from 48.0102)

15.1304 **Civil Drafting and Civil Engineering CAD/CADD.** A program that prepares individuals to apply technical knowledge and skills to develop working drawing and electronic simulations in support of civil engineers, geological engineers, and related professionals. Includes instruction in basic civil engineering principles, geological and seismographic mapping, machine drafting, computer-aided drafting (CAD), pipe drafting, survey interpretation, and blueprint reading. (Moved from 48.0103)

15.1305 **Electrical/Electronics Drafting and Electrical/Electronics CAD/CADD.** A program that prepares individuals to apply technical knowledge and skills to develop working schematics and representations in support of electrical/electronic engineers, computer engineers, and related professionals. Includes instruction in basic electronics, electrical systems and computer layouts; electrode-mechanical drafting; manufacturing circuitry; computer-aided drafting (CAD); and electrical systems specification interpretation. (Moved from 48.0104)

15.1306 **Mechanical Drafting and Mechanical Drafting CAD/CADD.** A program that prepares individuals to apply technical knowledge and skills to develop working drawings and electronic simulations in support of mechanical and industrial engineers, and related professionals. Includes instruction in manufacturing materials and processes, mechanical drafting, electrode-mechanical drafting, basic metallurgy, geometric dimensioning and tolerancing, blueprint reading and technical communication. (Moved from 48.0105)

15.1399 **Drafting/Design Engineering Technologies/Technicians, Other. (NEW)** Any instructional program in drafting/design engineering technologies not listed above.

15.14 **Nuclear Engineering Technologies/Technicians. (NEW)** Instructional content is defined in code 15.1401.

15.1401 **Nuclear Engineering Technology/Technician. (NEW)** A program that prepares individuals to apply basic engineering, knowledge and technical skills in support of engineer and other professionals operating nuclear facilities and engaged in nuclear applications and safety procedures. Includes instruction in physics, nuclear science, nuclear systems, nuclear plant and systems design, radiological safety, radiological applications, and applicable law and regulations.

15.15 **Engineering-Related Fields. (NEW)** Instructional content is defined in code 15.1501.

15.1501 **Engineering/Industrial Management.** A program that focuses on the application of engineering principles to the planning and operational management of industrial and manufacturing operations, and prepares individuals to plan and manage such operations. Includes instruction in accounting, engineering economy, financial management, industrial and human resources management, industrial psychology, management information systems, mathematical modeling and

optimization, quality control, operations research, safety and health issues, and environmental program management.
(Moved from 14.3001)

----- **Business Administration and Management.** (Report under 52.0201)

15.99 Engineering Technologies/Technicians, Other. Instructional content is defined in code 15.9999.

15.9999 Engineering Technologies/Technicians, Other. Any instructional program in engineering technologies not listed above.

16. FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS. Instructional programs that focus on foreign languages and literatures, the humanistic and scientific study of linguistics, and the provision of professional interpretation and translation services.

Note ➤ *Several new programs have been added to the 16. Series to better reflect the globalization of language study programs.*

----- **AREA, ETHNIC, CULTURAL, AND GENDER STUDIES.** (Report under 05. Series)

----- **ENGLISH LANGUAGE AND LITERATURE/LETTERS.** (Report under 23. Series)

----- **LANGUE et LITTÉRATURES FRANÇAISES/LETTRES.** (Report under 55. Series, programs are located in *appendix A*)

16.01 Linguistic, Comparative, and Related Language Studies and Services. Instructional content for this group of programs is defined in codes 16.0101- 16.0199.

----- **Foreign Language Teacher Education.** (Report under 13.1306)

----- **Intercultural/Multicultural Studies.** (Report under 30.2301)

16.0101 Foreign Languages and Literatures, General. A general program that focuses on one or more modern foreign languages that is not specific as to the name of the language(s) studied; that is otherwise undifferentiated; or that introduces students to language studies at the basic/elementary level.

16.0102 Linguistics. A program that focuses on language, language development, and relationships among languages and language groups from a humanistic and/or scientific perspective. Includes instruction in subjects such as psycholinguistics, behavioral linguistics, language acquisition, sociolinguistics, mathematical and computational linguistics, grammatical theory and theoretical linguistics, philosophical linguistics, philology and historical linguistics, comparative linguistics, phonetics, phonemics, dialectology, semantics, functional grammar and linguistics, language typology, lexicography, morphology and syntax, orthography, stylistics, structuralism, rhetoric, and applications to artificial intelligence.

----- **Communication Studies/Speech Communication and Rhetoric.** (Report under 09.0101)

----- **Artificial Intelligence and Robotics.** (Report under 11.0102)

- **Cognitive Psychology and Psycholinguistics.** (Report under 42.0301)
- 16.0103** **Language Interpretation and Translation.** A program that prepares individuals to be professional interpreters and/or translators of documents and data files, either from English or (Canadian) French into another language or languages or vice versa. Includes intensive instruction in one or more foreign languages plus instruction in subjects such as single- and multiple-language interpretation, one- or two-way interpretation, simultaneous interpretation, general and literary translation, business translation, technical translation, and other specific applications of linguistic skills.
- **Sign Language Interpretation/Interpreter.** (Report under 16.1603)
- 16.0104** **Comparative Literature.** A program that focuses on two or more literary traditions in the original languages or in translation. Includes instruction in comparative linguistics; applicable foreign languages; English/French language and literature; literary criticism; and applications to genre, period, national, and textual studies as well as literary forms such as poetry, prose, and drama. (*Moved from 23.0301*)
- 16.0199** **Linguistic, Comparative, and Related Language Studies and Services, Other. (NEW)** Any instructional program in linguistic, comparative, and related language studies and services not listed above.
- 16.02 African Languages, Literatures, and Linguistics. (NEW)** Instructional content is defined in code 16.0201.
- 16.0201** **African Languages, Literatures, and Linguistics. (NEW)** A program that focuses on one or more of the languages native to the African continent, with an emphasis on sub-Saharan Africa but including some Saharan languages and dialects. Includes instruction in African linguistic philology and diffusion; African literatures (oral and written); Bantu languages (Swahili, Lingala, Tswana, Kongo, Zulu, Xhosa, Luba, Kikuyu, Sotho, Rundi, Rwanda, Swazi, and others); Nilo-Saharan languages (Kanuri, Ibo, Zande, Bagirmi, Dinka, Nubian, Maasai, and others); Niger-Congo languages (Wolof, Temne, Fon, Sango, Mossi, Senufo, Yoruba, Igbo, Akan, Ewe, Fulani, Mande, and others); Khoisan languages (!Kung and others); and the Chadic (Hausa, Margi, and others) and Ethiopic (Amharic, Galla, Ge'ez, Tigre, Tigrinya, and others) languages of the Hamito-Semitic language family.
- **African Studies.** (Report under 05.0101)
- 16.03 East Asian Languages, Literatures, and Linguistics.** Instructional content for this group of programs is defined in codes 16.0300- 16.0399.
- 16.0300** **East Asian Languages, Literatures, and Linguistics, General. (NEW)** A general program that focuses on one or more of the Sino-Tibetan, Japanese, and Korean languages of East Asia. Includes instruction in philology, linguistics, dialects and pidgins, literature, and applications to business, science/technology, and other settings.
- **East Asian Studies.** (Report under 05.0104)

- 16.0301** **Chinese Language and Literature.** A program that focuses on the Chinese language and its associated dialects and literature. Includes instruction in Chinese philology, Archaic and Classical Chinese, Modern Standard Chinese (Guóyu), Mandarin, Cantonese, Taiwanese, Wu, Min, Hunanese, Hakka, other dialects and pidgins, and applications to business, science/technology, and other settings.
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- Chinese Studies.** (Report under 05.0123)
- 16.0302** **Japanese Language and Literature.** A program that focuses on the Japanese language. Includes instruction in Japanese philology; Ancient, Medieval, and Modern Japanese; Japanese dialects; and applications to business, science/technology, and other settings.
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- Japanese Studies.** (Report under 05.0127)
- 16.0303** **Korean Language and Literature. (NEW)** A program that focuses on the Korean language. Includes instruction in Korean philology; Pre-Modern and Modern Korean; Korean dialects; and applications to business, science/technology, and other settings.
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- Korean Studies.** (Report under 05.0128)
- 16.0304** **Tibetan Language and Literature. (NEW)** A program that focuses on the Tibetan language. Includes instruction in Tibetan philology, secular and religious Tibetan, Tibetan dialects, and applications to business, science/technology, Buddhist studies, and other settings.
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- Tibetan Studies.** (Report under 05.0131)
-
- Buddhist Studies.** (Report under 38.0202)
- 16.0399** **East Asian Languages, Literatures, and Linguistics, Other.** Any instructional program in East Asian languages, literatures, and linguistics not listed above, including such languages as Formosan, Miao, Yuan, Manchu, Ainu, and others.
- 16.04** **Slavic, Baltic and Albanian Languages, Literatures, and Linguistics.** Instructional content for this group of programs is defined in codes 16.0400- 16.0499.
- 16.0400** **Slavic Languages, Literatures, and Linguistics, General. (NEW)** A general program that focuses on one or more of the Slavic languages of Central and Eastern Europe. Includes instruction in philology, linguistics, dialects and pidgins, literature, and applications to business, science/technology, and other settings.
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- Central/Middle and Eastern European Studies.** (Report under 05.0105)
-
- Balkans Studies.** (Report under 05.0116)
-
- Baltic Studies.** (Report under 05.0117)
-
- Slavic Studies.** (Report under 05.0118)

- 16.0401** ***Baltic Languages, Literatures, and Linguistics. (NEW)*** A program that focuses on the languages of the Baltic peoples and the relationship of Baltic philology to comparative linguistics and Indo-European origins. Includes instruction in the modern languages of Latvian and Lithuanian, their literature, and applications to business, science/technology, and other settings; and extinct languages such as Old Prussian and Curionian.
- **Baltic Studies.** (Report under 05.0117)
- 16.0402** **Russian Language and Literature.** A program that focuses on the Russian language. Includes instruction in Russian philology, Old Russian, Modern Russian and dialects, literature, and applications to business, science/technology, and other settings.
- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Russian Studies.** (Report under 05.0110)
- **Slavic Studies.** (Report under 05.0118)
- [16.0403]** **Slavic Languages and Literatures (Other Than Russian).** (Deleted, Report under 16.0400)
- 16.0404** ***Albanian Language and Literature. (NEW)*** A program that focuses on the Albanian language. Includes instruction in Albanian/Illyrian philology, Ghegg and Tosk dialects, Modern Standard Albanian, and applications to business, science/technology, and other settings.
- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Balkans Studies.** (Report under 05.0116)
- 16.0405** ***Bulgarian Language and Literature. (NEW)*** A program that focuses on the Bulgarian language. Includes instruction in Bulgarian philology, literature, and applications to business, science/technology, and other settings.
- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Balkans Studies.** (Report under 05.0116)
- **Slavic Studies.** (Report under 05.0118)
- 16.0406** ***Czech Language and Literature. (NEW)*** A program that focuses on the Czech language. Includes instruction in Czech philology, literature, and applications to business, science/technology, and other settings.
- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Slavic Studies.** (Report under 05.0118)

- 16.0407** ***Polish Language and Literature. (NEW)*** A program that focuses on the Polish language. Includes instruction in Polish philology, dialects, literature, and applications to business, science/technology, and other settings.
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- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Baltic Studies.** (Report under 05.0117)
- **Slavic Studies.** (Report under 05.0118)
- **Polish Studies.** (Report under 05.0129)
- 16.0408** ***Serbian, Croatian, and Serbo-Croatian Languages and Literatures. (NEW)*** A program that focuses on the Serbian and/or Croatian languages, either separately or considered as related derivatives of a common ancestor language. Includes instruction in Serbo-Croatian philology, dialects such as Bosnian, Modern Croatian, Modern Serbian, and applications to business, science/technology, and other settings.
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- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Balkans Studies.** (Report under 05.0116)
- **Slavic Studies.** (Report under 05.0118)
- 16.0409** ***Slovak Language and Literature. (NEW)*** A program that focuses on the Slovak language. Includes instruction in Slovak philology, dialects, literature, and applications to business, science/technology, and other settings.
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- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Slavic Studies.** (Report under 05.0118)
- 16.0410** ***Ukrainian Language and Literature. (NEW)*** A program that focuses on the Ukrainian language. Includes instruction in Ukrainian philology, dialects, literature, and applications to business, science/technology, and other settings.
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- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Slavic Studies.** (Report under 05.0118)
- **Ukraine Studies.** (Report under 05.0132)
- 16.0499** ***Slavic, Baltic, and Albanian Languages, Literatures, and Linguistics, Other.*** A program that focuses on Slavic languages, literatures, and linguistics not listed above, including such languages as Lusatian (Sorbian/Wendish), Kashubian, Macedonian, Slovenian, Belarussian, Old Church Slavonic, and others.

16.05 Germanic Languages, Literatures, and Linguistics. Instructional content for this group of programs is defined in codes 16.0500- 16.0599.

16.0500 *Germanic Languages, Literatures, and Linguistics, General. (NEW)*

A general program that focuses on one or more of the Germanic languages of Western, Central, and Northern Europe. Includes instruction in philology, linguistics, dialects and pidgins, literature, and applications to business, science/technology, and other settings.

Central/Middle and Eastern European Studies. (Report under 05.0105)

European Studies/Civilization. (Report under 05.0106)

Western European Studies. (Report under 05.0114)

16.0501 *German Language and Literature.* A program that focuses on the German language and related dialects as used in Austria, Germany, Switzerland, neighboring European countries containing German-speaking minorities, and elsewhere. Includes instruction in German philology; Old, Middle, and High German; Plattdeutsch and other regional dialects; and applications to business, science/technology, and other settings.

German Studies. (Report under 05.0125)

16.0502 *Scandinavian Languages, Literatures, and Linguistics.* A program that focuses on one or more of the languages, literatures, and linguistics of the peoples of Scandinavia and associated Northern European island groups. Programs may involve multiple languages and language families, not be specific as to the name of the language(s) studied, or be otherwise undifferentiated.

Scandinavian Studies. (Report under 05.0111)

16.0503 *Danish Language and Literature. (NEW)* A program that focuses on the Danish language and related dialects as used in Denmark and Greenland (Kaalit Nuniat). Includes instruction in Danish philology, literature, and applications to business, science/technology, and other settings.

16.0504 *Dutch/Flemish Language and Literature. (NEW)* A program that focuses on the Dutch language and related dialects as used in The Netherlands, Flemish-speaking Belgium, the Netherlands Antilles, and Suriname. Includes instruction in Dutch/Flemish philology, literature, Dutch Creoles, and applications to business, science/technology, and other settings.

16.0505 *Norwegian Language and Literature. (NEW)* A program that focuses on the Norwegian language and related dialects. Includes instruction in Norwegian philology, Bokmal and Nynorsk dialects, literature, and applications to business, science/technology, and other settings.

16.0506 *Swedish Language and Literature. (NEW)* A program that focuses on the Swedish language and related dialects as used in Sweden, Finland, and related island groups. Includes instruction in Swedish philology, literature, and applications to business, science/technology, and other settings.

- 16.0599** **Germanic Languages, Literatures, and Linguistics, Other.** Any instructional program in Germanic languages, literatures, and linguistics not listed above, including languages such as Old Saxon, Gothic, Frisian, Luxembourgetsch, Yiddish, Afrikaans, Icelandic, Old Norse, and Faeroese.
- 16.06** **Modern Greek Language and Literature.** Instructional content is defined in code 16.0601.
- 16.0601** **Modern Greek Language and Literature.** A program that focuses on the development and use of the Greek language in the period dating from the late 15th century to the present. Includes instruction in modern Greek literature, current Greek dialects, and applications to business, science/technology, and other settings.
- 16.07** **South Asian Languages, Literatures, and Linguistics.** Instructional content for this group of programs is defined in codes 16.0700 – 16.0799.
- 16.0700** **South Asian Languages, Literatures, and Linguistics, General. (NEW)** A general program that focuses on one or more of the languages, literatures, and linguistics of the peoples speaking the Indo-Aryan (Indic), Dravidian, and other languages of the Indian subcontinent and associated borderlands and island groups. Programs may involve multiple languages and language families, not be specific as to the name of the language(s) studied, or be otherwise undifferentiated.
- 16.0701** **Hindi Language and Literature. (NEW)** A program that focuses on the Hindi language, antecessors, and related dialects as spoken in India. Includes instruction in Hindi philology, Modern Hindi, Hindustani, related dialects, and applications in business, science/technology, and other settings.
- 16.0702** **Sanskrit and Classical Indian Languages, Literatures, and Linguistics. (NEW)** A program that focuses on Sanskrit and related ancient and classical Indo-Aryan languages. Includes instruction in Vedic and Classical Sanskrit, Pali and other Prakrits, and the historical development of Indo-Aryan languages and their relation to Indo-European languages such as Greek, Latin and the Baltic languages.
- **South Asian Studies.** (Report under 05.0112)
- **Buddhist Studies.** (Report under 38.0202)
- **Hindu Studies.** (Report under 38.0204)
- [16.0703]** **South Asian Languages, Literatures, and Linguistics.** (Deleted, Report under 16.0700).
- 16.0704** **Bengali Language and Literature. (NEW)** A program that focuses on the Bengali language (Bangla) and related dialects as spoken in India and Bangladesh. Includes instruction in Bengali philology, Modern Bangla, Bengali dialects, and applications in business, science/technology, and other settings.

- 16.0705** *Punjabi Language and Literature. (NEW)* A program that focuses on the Punjabi language (Punjabi) and related dialects as spoken in India and Pakistan. Includes instruction in Panjabi philology, Modern Panjabi, Panjabi dialects, and applications in business, science/technology, and other settings.
- 16.0706** *Tamil Language and Literature. (NEW)* A program that focuses on the Tamil language and related dialects as spoken in South India and Sri Lanka. Includes instruction in Tamil philology, Classical and Modern Tamil, Tamil dialects, and applications in business, science/technology, and other settings.
- 16.0707** *Urdu Language and Literature. (NEW)* A program that focuses on the Urdu language and related dialects as spoken in Pakistan and portions of India and Afghanistan. Includes instruction in Urdu philology, Modern Urdu, Urdu dialects, and applications in business, science/technology, and other settings.
- 16.0799** *South Asian Languages, Literatures, and Linguistics, Other. (NEW)* Any instructional program in South Asian languages, literatures, and linguistics not listed above, including such languages as Bihari, Marathi, Gujarati, Rajasthani, Oriya, Nepalese, Sinhalese, Assamese, Sindhi, Romany, Telugu, Kannanda, Malayalam, and others.
- 16.08** *Iranian/Persian Languages, Literatures, and Linguistics. (NEW)* Instructional content is defined in code 16.0801.
-
- Middle and Near Eastern Studies.** (Report under 05.0108)
- 16.0801** *Iranian/Persian Languages, Literatures, and Linguistics. (NEW)* A program that focuses on the languages used in ancient, medieval, and modern Iran and its border regions. Includes instruction in modern Farsi/Persian; Avestan/Old Persian; related modern languages such as Pashto, Kurdish, Baluchi, Dari, Tadjik, Ossetian, and others; related extinct languages such as Median, Parthian, Bactrian, Sogdian, and Khwarezmian; and applications of modern Farsi and other languages to applications in business, science/technology, and other settings.
- 16.09** **Romance Languages, Literatures, and Linguistics.** Instructional content for this group of programs is defined in codes 16.0900- 16.0999.
- 16.0900** *Romance Languages, Literatures, and Linguistics, General. (NEW)* A general program that focuses on one or more of the Romance languages of Western, Central, and Southern Europe. Includes instruction in philology, linguistics, dialects and pidgins, literature, and applications to business, science/technology, and other settings.
-
- Central/Middle and Eastern European Studies.** (Report under 05.0105)
-
- European Studies/Civilization.** (Report under 05.0106)
-
- Western European Studies.** (Report under 05.0114)
- 16.0901** **French Language and Literature.** A program that focuses on the French language and related dialects and creoles. Includes instruction in

French philology, Metropolitan French, Canadian French, African and Caribbean Creoles, French regional dialects, and applications in business, science/technology, and other settings.

---- **Western European Studies.** (Report under 05.0114)

---- **French Studies.** (Report under 05.0124)

16.0902 **Italian Language and Literature.** A program that focuses on the Italian language and related dialects. Includes instruction in Italian philology, Modern Italian, Italian regional dialects, and applications in business, science/technology, and other settings.

---- **Western European Studies.** (Report under 05.0114)

---- **Italian Studies.** (Report under 05.0126)

16.0904 **Portuguese Language and Literature.** A program that focuses on the Portuguese language and related dialects. Includes instruction in Portuguese philology, Metropolitan Portuguese, Luso-Brazilian Portuguese, regional dialects, and applications in business, science/technology, and other settings.

---- **Latin American Studies.** (Report under 05.0107)

---- **Western European Studies.** (Report under 05.0114)

---- **Spanish and Iberian Studies.** (Report under 05.0130)

16.0905 **Spanish Language and Literature.** A program that focuses on the Spanish language and related dialects. Includes instruction in Spanish philology, Modern Castilian, various Latin American dialects, regional Spanish dialects, and applications in business, science/technology, and other settings.

---- **Latin American Studies.** (Report under 05.0107)

---- **Western European Studies.** (Report under 05.0114)

---- **Spanish and Iberian Studies.** (Report under 05.0130)

---- **Hispanic-American, Puerto Rican and Mexican American Studies.** (Report under 05.0203)

16.0906 **Romanian Language and Literature. (NEW)** A program that focuses on the Romanian language and related dialects. Includes instruction in Romanian philology, Modern Romanian, Romanian regional dialects, and applications in business, science/technology, and other settings.

---- **Central/Middle and Eastern European Studies.** (Report under 05.0105)

16.0907 **Catalan Language and Literature. (NEW)** A program that focuses on the Catalan language and related dialects. Includes instruction in Catalan philology, Modern Catalan, Catalan dialects, and applications in business, science/technology, and other settings.

---- **Western European Studies.** (Report under 05.0114)

- **French Studies.** (Report under 05.0124)
- **Spanish and Iberian Studies.** (Report under 05.0130)
- 16.0999 Romance Languages, Literatures, and Linguistics, Other.** Any instructional program in Romance languages, literatures, and linguistics not listed above, including such languages as Rhaeto-Romansch, Friulian, Galician, Sardinian, Provençal/Langue d'Oc, and others.
- 16.10 American Indian/Native American Languages, Literatures, and Linguistics. (NEW)**
Instructional content is defined in code 16.1001.
- **American Indian/Native American Studies.** (Report under 05.0202)
- 16.1001 American Indian/Native American Languages, Literatures, and Linguistics. (NEW)** A program that focuses on one or more of the languages native to the Western Hemisphere, with an emphasis on American Indian languages but including other Native American languages. Includes instruction in American linguistic philology; oral and written literatures; Inuit and Aleut languages; Hawaiian (Polynesian language family); North American language families such as Algonkian (Arapaho, Blackfoot, Cheyenne, Cree, Micmac, Ojibwa, and others), Athabaskan (Apache, Chipewyan, Kiowa, Navajo, Na-Dene, and others), Siouan (Crow, Dakota, Hidatsa, Osage, Winnebago, and others), Muskogean (Choctaw, Creek, and others), Iroquoian (Cherokee, Mohawk, Oneida, Senecan, and others); Yuman; Mayan (Classical Mayan, Quiché, Huastec, and others); Zapotecan (Zapotec, Mixtec, Otomi, Popolacan, and others), and Uto-Aztecan (Hopi, Shoshone, Zuñi, Nahuatl, and others); South American language families such as Andean-Equatorial (Quechua, Aymará, Tupí, Guaraní, Arawak, Island Carib, and others); Ge-Pano-Carib (Carib and others); and Macro-Chibchan (Chibcha and others); and other minor languages.
- 16.11 Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics.**
Instructional content for this group of programs is defined in codes 16.1100- 16.1199.
- 16.1100 Semitic Languages, Literatures, and Linguistics, General. (NEW)** A general program that focuses on one or more of the Semitic languages of Western Asia, North Africa, and Europe. Includes instruction in philology, linguistics, dialects and pidgins, literature, and applications to business, science/technology, and other settings.
- **Middle and Near Eastern Studies.** (Report under 05.0108)
- 16.1101 Arabic Language and Literature.** A program that focuses on the Arabic language as spoken by the Arab and other peoples from earliest times to the present. Includes instruction in Arabic philology, Classical Arabic, Modern Standard Arabic, Arabic dialects, and applications to business, science/technology, and other settings.
- **Islamic Studies.** (Report under 38.0205)
- 16.1102 Hebrew Language and Literature.** A program that focuses on the Hebrew language in either pre-modern or modern forms. Includes instruction in Hebrew philology, Biblical Hebrew (including Pre- and Post-

Exilic scripts), Modern Hebrew, dialects and offshoots such as Samaritan, and applications to business, science/technology, and other settings.

---- **Jewish/Judaic Studies.** (Report under 38.0206)

---- **Rabbinical Studies (M.H.L/Rav).** (Report under 39.0605)

---- **Talmudic Studies.** (Report under 39.0606)

16.1103 **Ancient Near Eastern and Biblical Languages, Literatures, and Linguistics. (NEW)** A program that focuses on one or more of the extinct Semitic and/or Non-Semitic languages spoken in the ancient Near East, including those used to write historical Jewish and Christian religious texts. Includes instruction in languages such as Egyptian/Coptic, Sumerian, Akkadian, Babylonian, Assyrian, Aramaic, Cannanite, Phoenician, Samaritan, Ugaritic, Syriac, Mandaean, Hattic, Elamite, Hurrian, Hittite, Urartian, Lydian, Luwian, Lycian, Palaic, Sabaeen/South Arabian, and other associated languages, plus allied disciplines such as philology, epigraphy, papyrology, numismatics, and textual studies.

---- **Bible/Biblical Studies.** (Report under 39.0201)

16.1199 **Middle/Near Eastern and Semitic Languages, Literatures, and Linguistics, Other.** Any instructional program in Middle/Near Eastern and Semitic languages, literatures, and linguistics not listed above, including such languages as Maltese, the Berber languages, Modern Assyrian, and the Cushitic languages.

16.12 **Classics and Classical Languages, Literatures, and Linguistics.** Instructional content for this group of programs is defined in codes 16.1200– 16.1299.

16.1200 **Classics and Classical Languages, Literatures, and Linguistics, General.** A general program that focuses on the literary culture of the ancient Graeco-Roman world and the Greek and Latin languages and literatures and their development prior to the fall of the Roman Empire. *(Moved from 16.1201)*

---- **Ancient Studies/Civilization.** (Report under 30.2201)

---- **Medieval and Renaissance Studies.** (Report under 30.1301)

---- **Archaeology.** (Report under 45.0301)

---- **History.** (Report under 54. Series)

(16.1201) **Classics and Classical Languages and Literatures.** (Moved, Report under 16.1200)

16.1202 **Ancient/Classical Greek Language and Literature.** A program that focuses on the Greek language and literature from its origins through the fall of the Byzantine (Eastern Roman) Empire, as a secular and/or theological subject. Includes instruction in Greek philology, Attic dialects, Hellenistic dialects, Koine (Biblical) Greek, and Medieval or Byzantine Greek.

- 16.1203 Latin Language and Literature.** A program that focuses on the Latin language and literature from its origins through its decline and its current ecclesiastical usage, as a secular and/or theological subject. Includes instruction in Latin philology, related Italic dialects, Late Roman and Medieval Latin, and modern Church Latin.
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- Latin Teacher Education.** (Report under 13.1333)
- 16.1299 Classics and Classical Languages, Literatures, and Linguistics, Other.** Any instructional program in classics and classical languages, literatures, and linguistics not listed above, including non-Latin Italic languages of the ancient period such as Etruscan, Samnian, Oscan, and others.
- 16.13 Celtic Languages, Literatures, and Linguistics. (NEW)** Instructional content is defined in code 16.1301.
- 16.1301 Celtic Languages, Literatures, and Linguistics. (NEW)** A program that focuses on the historical and modern languages spoken by the Celtic peoples of the British Isles, Continental Europe, and Asia Minor. Includes instruction in Celtic philology; modern languages such as Irish, Scots Gaelic, Welsh, and Breton; and extinct or revived languages such as Cornish, Manx, Galatian, and others.
- 16.14 Southeast Asian and Australasian/Pacific Languages, Literatures, and Linguistics. (NEW)** Instructional content for this group of programs is defined in codes 16.1400 - 16.1499.
- 16.1400 Southeast Asian Languages, Literatures, and Linguistics, General. (NEW)** A program that generally focuses on one or more of the modern or historical languages spoken or originating in mainland Southeast Asia and the Indonesian and Philippines Archipelagoes, including members of the Thai, Tibeto-Burman, and Malayo-Polynesian language families. Programs may involve multiple languages and language families, not be specific as to the name of the language(s) studied, or be otherwise undifferentiated.
-
- Southeast Asian Studies.** (Report under 05.0113)
- 16.1401 Australian/Oceanic/Pacific Languages, Literatures, and Linguistics. (NEW)** A program that focuses on the languages spoken by the Melanesian, Micronesian, and Polynesian peoples inhabiting Papua/New Guinea, Australia, New Zealand, and the island groups of the Pacific Ocean. Includes instruction in such languages as the Papuan languages (Pidgin, Police Motu, and others); the Australian languages; Micronesian languages (Nauruan, Fijian, Mola, and others); and the Polynesian languages (Maori, Tahitian, Tongan, Samoan, and others); their oral and written literature; and applications to business, science/technology, and other settings.
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- Pacific Area Studies.** (Report under 05.0109)
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- American Indian/Native American Studies.** (Report under 05.0202)

- 16.1402** ***Bahasa Indonesian/Bahasa Malay Languages and Literatures. (NEW)*** A program that focuses on the modern Bahasa Malay and Bahasa Indonesian languages spoken in Indonesia, Malaysia, and Singapore. Includes instruction in Malay and Indonesian philology, Bahasa Indonesian, Bahasa Malay, historical Malay and Javanese, Bahasa dialects, and applications to business, science/technology, and other settings.
- 16.1403** ***Burmese Language and Literature. (NEW)*** A program that focuses on the Burmese language. Includes instruction in Burmese philology, literature, and applications to business, science/technology, and other settings.
- 16.1404** ***Filipino/Tagalog Language and Literature. (NEW)*** A program that focuses on the modern Filipino/Tagalog language as used in the Philippines. Includes instruction in Filipino philology, literature, and applications to business, science/technology, and other settings.
- 16.1405** ***Khmer/Cambodian Language and Literature. (NEW)*** A program that focuses on the Khmer language as spoken in Cambodia. Includes instruction in Mon-Khmer philology, Classical and Modern Khmer, literature, and applications to business, science/technology, and other settings.
- 16.1406** ***Lao/Laotian Language and Literature. (NEW)*** A program that focuses on the Laotian language. Includes instruction in Laotian philology, Modern Laotian and dialects, literature, and applications to business, science/technology, and other settings.
- 16.1407** ***Thai Language and Literature. (NEW)*** A program that focuses on the Thai languages. Includes instruction in Thai philology, dialects, literature, and applications to business, science/technology, and other settings.
- 16.1408** ***Vietnamese Language and Literature. (NEW)*** A program that focuses on the Vietnamese language. Includes instruction in Vietnamese philology, Classical and Modern Vietnamese, dialects, literature, and applications to business, science/technology, and other settings.
- 16.1499** ***Southeast Asian and Australasian/Pacific Languages, Literatures, and Linguistics, Other. (NEW)*** Any instructional program in Southeast Asian and Australasian/Pacific languages, literatures, and linguistics not listed above, including such languages as Shan, Yuan, Lolo-Moso, Bodo, Naga, Kachin, Karen, Sundan, Malagasy, Batak, Madurese, Makassarrese, Achinese, Bisayan, Ilokano, Dayak, and others.
- 16.15** ***Turkic, Ural-Altaic, Caucasian, and Central Asian Languages, Literatures, and Linguistics. (NEW)*** Instructional content for this group of programs is defined in codes 16.1501 - 16.1599.
- **Ural-Altaic and Central Asian Studies.** (Report under 05.0120)
- 16.1501** ***Turkish Language and Literature. (NEW)*** A program that focuses on the Turkish language in either or both of its pre-modern and modern variants. Includes instruction in Turkish philology, Ottoman Turkish, Modern Turkish, Turkish dialects, and applications to business, science/technology, and other settings.

- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- **Middle and Near Eastern Studies.** (Report under 05.0108)
- **Balkans Studies.** (Report under 05.0116)
- **Ural-Altai and Central Asian Studies.** (Report under 05.0120)
- 16.1502** ***Finnish and Related Languages, Literatures, and Linguistics. (NEW)***
A program that focuses on Finnish and related Finnic languages such as Estonian, Karelian, Sami, and others. Includes instruction in Finnish and Finnic philology, oral and written literatures, and applications to business, science/technology, and other settings.
- **Scandinavian Studies.** (Report under 05.0111)
- **Baltic Studies.** (Report under 05.0117)
- 16.1503** ***Hungarian/Magyar Language and Literature. (NEW)*** A program that focuses on the Hungarian language. Includes instruction in Hungarian philology, Hungarian literature, and applications to business, science/technology, and other settings.
- **Central/Middle and Eastern European Studies.** (Report under 05.0105)
- 16.1504** ***Mongolian Language and Literature. (NEW)*** A program that focuses on the Mongolian language. Includes instruction in Mongolian philology, Mongolian dialects, oral and written literature, and applications to business, science/technology, and other settings.
- **Ural-Altai and Central Asian Studies.** (Report under 05.0120)
- 16.1599** ***Turkic, Ural-Altai, Caucasian, and Central Asian Languages, Literatures, and Linguistics, Other. (NEW)*** Any instructional program in the Turkic, Caucasian, and Central Asian Languages, Literatures, and Linguistics not listed above including languages such as Altaic, Armenian, Avaric, Azeri, Chechen-Ingushetian, Bashkir, Georgian, Kazakh, Kirghiz, Tatar, Turkmen, Uighur, Uzbek, and others.
- 16.16** ***American Sign Language. (NEW)*** Instructional content for this group of programs is defined in codes 16.1601- 16.1699.
- 16.1601** ***American Sign Language (ASL). (NEW)*** A program that focuses on American Sign Language as a visual and motor medium of communication and discourse for deaf individuals and deaf culture. Includes instruction in the development of ASL, ASL morphology and syntax, signing technique, English translation of ASL, formal and colloquial ASL, and ASL transcription.
- **Education/Teaching of Individuals with Hearing Impairments, Including Deafness.** (Report under 13.1003)

16.1602 ***Linguistics of ASL and Other Sign Languages. (NEW)***
A program that focuses on the scientific and scholarly study of the development, structure, and use of American Sign Language (ASL) and other visual signed languages, both as vehicles for communication within the deaf community and in relation to spoken and written languages. Includes instruction in cognitive linguistics; ASL and sign language phonology, syntax, and morphology; sociolinguistics of the deaf community; comparative linguistics; and studies of specific sign languages such as ASL, Auslan (Australian Sign Language), LSF (French Sign Language), Shuwa jiten (Japanese Sign Language), HamNoSys (German Sign Language), Gestuno, and others.

16.1603 ***Sign Language Interpretation and Translation.*** A program that prepares individuals to function as simultaneous interpreters of American Sign Language (ASL) and other sign language systems employed to assist the hearing impaired, both one-way and two-way. Includes instruction in American Sign Language (ASL), alternative sign languages, finger spelling, vocabulary and expressive nuances, oral and physical translation skills, cross-cultural communications, slang and colloquialisms, and technical interpretation. (*Moved from 51.0205*)

16.1699 ***American Sign Language, Other. (NEW)*** Any instructional program that focuses on American Sign Language as a communication medium or language skill that is not listed above.

16.99 ***Foreign Languages, Literatures, and Linguistics, Other.*** Instructional content is defined in code 16.9999.

16.9999 ***Foreign Languages, Literatures, and Linguistics, Other.*** Any instructional program in foreign languages, literatures, and linguistics not listed above, including such unassigned languages as Basque and others.

19. ***FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES.*** Instructional programs that focus on the human interface with the physical, social, emotional, and intellectual environments and the developmental stages and needs of individuals in the interrelated spheres of family, workplace, and community. **Note** ➡ *This broad field was formerly known as Home Economics and Human Ecology and includes the postsecondary programs of the CIP Series 20., Vocational Home Economics.*

19.00 ***Work and Family Studies. (NEW)*** Instructional content is defined in code 19.0000.

19.0000 ***Work and Family Studies. (NEW)*** An introductory program that focuses on family and consumer science concepts and principles at the basic and vocational levels, and the various potential career paths open to interested students. Includes instruction in career, community, and family connections; family and family/consumer resources; human development; interpersonal relationships; nutrition and wellness; parenting; and career possibilities in various related areas.

19.01 ***Family and Consumer Sciences/Human Sciences, General.*** Instructional content is defined in code 19.0101.

19.0101 Family and Consumer Sciences/Human Sciences, General. A general program that focuses on family and consumer sciences, including how individuals develop and function in family, work, and community settings and how they relate to their physical, social, emotional, and intellectual environments.

Family and Consumer Sciences/Home Economics Teacher Education. (Report under 13.1308)

19.02 Family and Consumer Sciences/Human Sciences Business Services. Instructional content for this group of programs is defined in codes 19.0201- 19.0299.

19.0201 Business Family and Consumer Sciences/Human Sciences. A program that focuses on the relationship between the economy and the consuming individual and family. Includes instruction in consumption theory and practice, the production and distribution of retail goods and services, and the management of business enterprises.

Hospitality Services Management. (See also 52.09 Series)

19.0202 Family and Consumer Sciences/Human Sciences Communication. A program that focuses on communication of human sciences subject matter and related consumer information to a variety of audiences through print and non-print media.

19.0203 Consumer Merchandising/Retailing Management. (NEW) A program that focuses on product and service promotion from the perspective of individual and family consumers and that prepares individuals to function as consumer management and marketing consultants in for-profit and non-profit enterprises. Includes instruction in applied market research; consumer behavior; product sourcing and distribution; profitability; customer feedback and evaluation methods; promotion and retailing campaign development; and applications to specific domestic and international consumer markets.

Sales, Marketing, and Distribution Operations, General. (Report under 52.1801)

Retailing and Retail Operations. (Report under 52.1803)

Marketing/Marketing Management, General. (Report under 52.1401)

Marketing Research. (Report under 52.1402)

International Marketing. (Report under 52.1403)

19.0299 Family and Consumer Sciences/Human Sciences Business Services, Other. (NEW) Any instructional program in family and consumer sciences/human sciences business services not listed above.

[19.03] Family and Community Studies. (Deleted)

(19.0301) Family and Community Studies. (Moved, Report under 19.0707)

19.04 Family and Consumer Economics and Related Studies. Instructional content for this group of programs is defined in codes 19.0401- 19.0499.

19.0401 Family Resource Management Studies, General. A general program that focuses on the design and implementation of policies and processes contributing to successful individual and family resource management. Includes instruction in financial goal-setting and strategies; household income, assets, and debt management; preventing and resolving financial difficulties; and the use of relevant public resources.

Financial Planning and Services. (See also 52.0804)

19.0402 Consumer Economics. A program that focuses on the application of micro- and macro-economic theory to consumer behavior and individual and family consumption of goods and services. Includes instruction in modeling, economic forecasting, indexing, price theory, and analysis of individual commodities and services and/or groups of related commodities and services.

Economics. (See also 45.06 Series)

19.0403 Consumer Services and Advocacy. (NEW) A program that focuses on providing end-use advice and representational services to individuals and groups within a variety of settings, and the analytical and research techniques needed to protect consumers from unsafe, unreliable, and/or unhealthy products and services. Includes instruction in consumer advocacy, family management systems, ecological impacts of consumption practices, and analyzing and testing product quality and safety.

19.0499 Family and Consumer Economics and Related Services, Other. Any instructional program in family and consumer economics and related services not listed above.

19.05 Foods, Nutrition, and Related Services. Instructional content for this group of programs is defined in codes 19.0501- 19.0599.

19.0501 Foods, Nutrition, and Wellness Studies, General. A general program that focuses on the role of foods and nutrition in human health and wellness. Includes instruction in nutritional care and education, the planning and provision of food services, the development of consumable food products, life-span nutrition and wellness, the principles of nutritional assessment, and food safety and food composition.

Food Science. (Report under 01.1001)

[19.0502] Foods and Nutrition Science. (Deleted, Report under 19.0501)

[19.0503] Dietetics/Human Nutritional Services. (Deleted, Report under 51.3101 or 51.3102).

19.0504 Human Nutrition. (NEW) A program that focuses on the relationships between food consumption and human development and health. Includes instruction in the cellular and molecular processes of food processing in the human body, related metabolic processes, the

relationship of food and nutrition to disease, and nutritional needs across the life span.

---- **Dietetics.** (Report under 51.31 Series)

---- **Nutrition Sciences.** (See also 30.1901)

19.0505 Foodservice Systems Administration/Management. A program that focuses on the principles and practices relating to the administration of food service systems in institutional settings, and that prepares individuals to manage such operations in public and private facilities. Includes instruction in human nutrition, food safety, the design and organization of food service systems, purchasing, personnel management, and related business practices.

---- **Food Technology and Processing.** (See also 01.1002)

---- **Restaurant, Culinary, and Catering Management.** (See also 12.0504)

---- **Food Service, Waiter/Waitress, and Dining Room Management/Manager.** (See also 12.0507)

---- **Institutional Food Workers.** (Report under 12.0508)

---- **Hotel/Motel Administration/Management** (See also 52.0904)

---- **Restaurant/Food Services Management.** (See also 52.0905)

19.0599 Foods, Nutrition, and Related Services, Other. Any instructional program in foods, nutrition, and related services not listed above.

19.06 Housing and Human Environments. Instructional content for this group of programs is defined in codes 19.0601- 19.0699.

19.0601 Housing and Human Environments, General. A general program that focuses on the behavioral, social, economic, functional, and aesthetic aspects of housing, interiors, and other built environments. Includes instruction in analyzing, planning, designing, furnishing, and equipping residential, work, and leisure spaces to meet user needs and the study of related public policies.

---- **Environmental Design/Archectiture.** (See also 04.0401)

---- **Interior Architecture.** (See also to 04.0501)

---- **Interior Design.** (Report under 50.0408)

[19.0603] Interior Environments. (Deleted, Report under 19.0601)

19.0604 Facilities Planning and Management. (NEW) A program that focuses on strategic workplace and facility planning and that prepares individuals to function as facility and event managers and workplace consultants. Includes instruction in the principles of aesthetic and functional design; environmental psychology and organizational behavior; real estate planning; principles of occupational health and safety; event planning

and management; operations management; and applicable regulatory and policy issues.

19.0605 Home Furnishings and Equipment Installers. A program that prepares individuals to assist in home furnishings and decorations. Includes instruction in selecting, purchasing designing, and decorating; Home furnishings and equipment; floral design; accessory construction; textiles; and upholstery. (*Moved from 20.0501*)

19.0699 Housing and Human Environments, Other. Any instructional program in housing and human environments not listed above.

19.07 Human Development, Family Studies, and Related Services. Instructional content for this group of programs is defined in codes 19.0701- 19.0799.

19.0701 Human Development and Family Studies, General. A general program that focuses on basic human developmental and behavioral characteristics of the individual within the context of the family. Includes instruction in the conditions that influence human growth and development; strategies that promote growth and development across the life span; and the study of family systems.

19.0702 Adult Development and Aging. (NEW) A program that focuses on the characteristics of aging populations and the needs of older individuals in family and institutional settings. Includes instruction in the biological and psychological stages of aging; the provision of dependent care; serving the social, economic, and psychological needs of aging adults; related public policy issues; and adult community resources.

----- **Gerontology.** (See also 30.1101)

(19.0703) Family and Marriage Counseling. (*Moved, Report under 51.1505*)

19.0704 Family Systems. A program that focuses on the family as a social unit in its developmental, dynamic, comparative, and structural aspects, and the significance of the family as a system that impacts individuals and society. Includes instruction in related principles of sociology, psychology, behavioral sciences, and the humanities.

----- **Marriage and Family Therapy/Counseling.** (*Report under 51.1505*)

----- **Family Psychology.** (*Report under 42.2501*)

[19.0705] Gerontological Services. (*Deleted, Report under 19.0702*)

19.0706 Child Development. A program that focuses on the intellectual, social, emotional, and biological development of children and the planning and design of related human services. Includes instruction in parent-child relations; parenting practices; special needs of children; parental and environmental influences on child development; external support services; and related public policy issues.

----- **Developmental and Child Psychology.** (*See also 42.0701*)

19.0707 Family and Community Services. A program that focuses on the development and implementation of public, private, and voluntary support services for individuals, families, and localities and that prepares

individuals to function in a variety of occupations promoting family life, and family/community development. Includes instruction in family systems, human development, social services, community social and economic development, social policy, voluntary sector activities, and outreach and community education. (*Moved from 19.0301*)

---- **Community Organization and Advocacy.** (Report under 44.0201)

---- **Social Work.** (Report under 44.07 Series)

---- **Human Services.** (Report under 44.0000)

---- **Clinical/Medical Social Work.** (Report under 51.1503)

19.0708 **Child Care and Support Services Management. (NEW)** A program that focuses on the provision and management of child care services and that prepares individuals to plan, design, and manage child care facilities and programs that meet children's developmental needs and interests and that provide safe and healthy environments. Includes instruction in child development and psychology; home- and institution-based child care; identification of diseases, injuries, and psychological trauma and applicable referrals; parent relations; personnel and business management principles; and related laws and policies.

---- **Kindergarten/Pre-school Education and Teaching.** (Report under 13.1209)

19.0709 **Child Care Provider/Assistant.** A program that prepares individuals to be primary providers of home, family, residential, or institutional-based child care services. Includes instruction in child growth and development; nutrition; recreation; planning and supervision of play and learning activities; child abuse and neglect prevention; parent-child relationships; and applicable legal and administrative requirements. (*Moved from 20.0202*)

19.0799 **Human Development, Family Studies, and Related Services, Other.** Any instructional program in human development, family studies, and related services not listed above.

19.09 **Apparel and Textiles.** Instructional content for this group of programs is defined in codes 19.0901- 19.0999.

---- **Apparel and Accessories Marketing Operations.** (Report under appropriate code in 52.18 or 52.19 Series)

19.0901 **Apparel and Textiles, General.** A general program that focuses on the development of textile products and their distribution and use in terms of the psychological, social, economic, and physical needs of consumers. Includes instruction in the production, distribution, marketing, and end use of various apparel and textile products.

19.0902 **Apparel and Textile Manufacture. (NEW)** A program that focuses on the design, development, and production of textile products and related processes and systems. Includes instruction in functional and aesthetic design, human factors research, production planning, manufacturing processes, quality assessment, and distribution systems.

----- **Fashion/Apparel Design.** (Report under 50.0407)

19.0904 **Textile Science. (NEW)** A program that focuses on the properties and processing of fibers, yarns, whole fabrics, dyes, and finishes, both natural and synthetic. Includes instruction in the chemical and physical properties of textile materials; end-use analysis; interior furnishing applications; and industrial applications.

----- **Textile Sciences and Engineering.** (See also 14.2801)

19.0905 **Apparel and Textile Marketing Management. (NEW)** A program that focuses on marketing research and management as applied to the products and services of the apparel and textile industries. Includes instruction in applicable principles of textile and apparel design and manufacturing, sales and distribution systems, domestic and international market research, profitability, consumer research, and the design and implementation of marketing campaigns.

----- **Fashion Merchandising.** (Report under 52.1902)

----- **Marketing Management and Research.** (See also 52.14 Series)

19.0906 **Fashion and Fabric Consultant.** A program that prepares individuals to assist in apparel and fashion selection, style coordination, customer sales and consulting, fabric selection, clothing specifications, and contract buying activities. Includes instruction in supplying regular clothing needs or acting as a consultant for special events such as weddings.
(Moved from 20.0306)

19.0999 **Apparel and Textiles, Other. (NEW)** Any instructional program in apparel and textiles not listed above.

19.99 **Family and Consumer Sciences/Human Sciences, Other.** Instructional content is defined in code 19.9999.

19.9999 **Family and Consumer Sciences/Human Sciences, Other.** Any instructional program in family and consumer sciences/human sciences not listed above.

[20.] VOCATIONAL HOME ECONOMICS. (The entire series has been deleted, programs have been integrated into and should be reported under the appropriate codes in Series 19.). Refer to the Crosswalk in **table 3** for a specification of how/where these programs should be reported.

21. Programs for Series 21. (Technology Education/Industrial Arts) are located in chapter III. (beginning on page 244) .

22. LEGAL PROFESSIONS AND STUDIES. Instructional programs that prepare individuals for the legal profession, for related support professions and professional legal research, and focus on the study of legal issues in non-professional programs.

22.00 Non-Professional General Legal Studies (Undergraduate). (NEW) Instructional content for this group of programs is defined in codes 22.0000- 22.0001.

22.0000 Legal Studies, General. (NEW) A general program that focuses on law and legal issues from the perspective of the social sciences and humanities.

22.0001 Pre-Law Studies. A program that prepares individuals for the professional study of law at the post-baccalaureate level.
(Moved from 22.0102)

22.01 Law (LL.B, J.D.). Instructional content is defined in code 22.0101.

22.0101 Law (LL.B., J.D.). A program that prepares individuals for the independent professional practice of law, for taking state and national bar examinations, and for advanced research in jurisprudence. Includes instruction in the theory and practice of the legal system, including the statutory, administrative, and judicial components of civil and criminal law.

(22.0102) Pre-Law Studies. (Moved, Report under 22.0001)

(22.0103) Paralegal/Legal Assistant. (Moved, Report under 22.0302)

[22.0104] Judicial Science/Legal Specialization. (Deleted, Report under 22.0299)

(22.0199) Law and Legal Studies, Other. (Moved, Report under 22.9999)

22.02 Legal Research and Advanced Professional Studies (Post-LL.B./J.D.). (NEW) Instructional content for this group of programs is defined in codes 22.0201- 22.0299.

22.0201 Advanced Legal Research/Studies, General (LL.M., M.C.L., M.L.I., M.S.L., J.S.D./S.J.D.). (NEW) An integrated or undifferentiated program in one or more of the legal research or advanced practice fields.

22.0202 Programs for Foreign Lawyers (LL.M., M.C.L.). (NEW) A program that prepares lawyers educated outside the United States to understand U. S. or Canadian law and jurisprudence.

22.0203 American/U.S. Law/Legal Studies/Jurisprudence (LL.M., M.C.J., J.S.D./S.J.D.). (NEW) An advanced, professional program of the U. S. legal system, Constitution law, and jurisprudence. Includes instruction in legal history, legal sociology, philosophy of law, Constitutional law, legal procedure, and related topics.

22.0204 Canadian Law/Legal Studies/Jurisprudence (LL.M., M.C.J., J.S.D./S.J.D.). (NEW) An advanced, professional study of the Canadian legal system, Constitution law, and jurisprudence. Includes instruction in legal history, legal sociology, philosophy of law, Constitutional law, Commonwealth law, legal procedure, and related topics.

22.0205 Banking, Corporate, Finance, and Securities Law (LL.M., J.S.D./S.J.D.). (NEW) An advanced, professional study of the law and process related to the regulation of businesses and the financial services industry. Includes instruction in corporate law, antitrust law, securities

- law and regulation, negotiation, incorporation, partnerships, trusts, and related topics
- 22.0206** **Comparative Law (LL.M., M.C.L., J.S.D./S.J.D.). (NEW)** An advanced, professional study of legal systems and philosophies in comparative perspective.
- 22.0207** **Energy, Environment, and Natural Resources Law (LL.M., M.S., J.S.D./S.J.D.). (NEW)** An advanced, professional study of the law, policies, and regulations governing the energy industry, environmental protection, natural resources and land use, and related topics.
- 22.0208** **Health Law (LL.M., M.J., J.S.D./S.J.D.). (NEW)** An advanced, professional study of the law, policies and regulations affecting the health care industry, health professions, health services and insurance industries, and patients.
- 22.0209** **International Law and Legal Studies (LL.M., J.S.D./S.J.D.). (NEW)** An advanced, professional study of the law affecting relations between nations, the behavior of international organizations, and the international activities of private citizens and organizations.
- 22.0210** **International Business, Trade, and Tax Law (LL.M., J.S.D./S.J.D.). (NEW)** An advanced, professional study of the law, policies, and regulations governing transnational business and commercial practices, including the specialized tax law related to international financial transactions.
- 22.0211** **Tax Law/Taxation (LL.M., J.S.D./S.J.D.). (NEW)** An advanced, professional study of tax law and taxation procedures in U. S. or Canadian jurisdictions affecting individuals and corporations.
- 22.0299** **Legal Research and Advanced Professional Studies, Other. (NEW)** Any program in legal research and advanced professional studies not listed above.
- 22.03** **Legal Support Services. (NEW)** Instructional content for this group of programs is defined in codes 22.0301 – 22.0399.
- 22.0301** **Legal Administrative Assistant/Secretary.** A program that prepares individuals to serve as legal office managers, special assistants, and legal secretaries. Includes instruction in office management, secretarial science, principles of U. S. or Canadian law, legal terminology and documentation, legal research, legal software applications, law office procedures, record-keeping, billing, applicable policies and regulations, and professional standards and ethics. *(Moved from 52.0403)*
- 22.0302** **Legal Assistant/Paralegal.** A program that prepares individuals to perform research, drafting, investigatory, record-keeping and related administrative functions under the supervision of an attorney or court. Includes instruction in legal research, drafting legal documents, appraising, pleading, courthouse procedures, and legal specializations. *(Moved from 22.0103)*
- 22.0303** **Court Reporting/Court Reporter.** A program that prepares individuals to record and transcribe examinations, testimony, judicial orders and instructions, legal opinions, and other formal proceedings via print or

electronic methods. Includes instruction in legal terminology, legal transcription, shorthand, verbatim recording, equipment operation and procedures, applicable regulations, and professional standards and ethics. (Moved from 52.0405)

22.0399 **Legal Support Services, Other. (NEW)** Any program in legal support services not listed above.

22.99 **Legal Professions and Studies, Other. (NEW)** Instructional content is defined in code 22.9999.

22.9999 **Legal Professions and Studies, Other. (NEW)** Any program in law, legal services, and legal studies not listed above.

23. **ENGLISH LANGUAGE AND LITERATURE/LETTERS.** Instructional programs that focus on the structure and use of the English language and dialects, speech, writing, and various aspects of the literatures and cultures of the English-speaking peoples.

----- **FRENCH (CANADIAN) LANGUAGE AND LITERATURE/LETTERS. (Report under 55. Series, located in appendix A) Note:** ➔ The codes in Series 55. are for the exclusive use of Statistics Canada in collecting data on Canadian programs in French. The use of Series 55. codes in the United States is inappropriate. Programs that focus on the study of French as a foreign language or that provide instruction in teaching French in school settings should be reported using Series 13. or 16.)

----- **FOREIGN LANGUAGE AND LITERATURES.** (Report under 16. Series)

23.01 **English Language and Literature, General.** Instructional content is defined in code 23.0101.

23.0101 **English Language and Literature, General.** A general program that focuses on the English language, including its history, structure and related communications skills; and the literature and culture of English-speaking peoples.

----- **English/Language Arts Teacher Education.** (Report under 13.1305)

----- **Classics.** (Report under 16.12 Series)

----- **Teaching English as a Second or Foreign Language.** (Report under 13.1401)

[23.03] Comparative Literature. (Deleted)

(23.0301) Comparative Literature. (Moved, Report under 16.0104)

23.04 **English Composition.** Instructional content is defined in code 23.0401.

23.0401 **English Composition.** A program that focuses on the principles of English vocabulary, grammar, morphology, syntax and semantics; and techniques of selecting, developing, arranging, combining and expressing ideas in appropriate written forms.

- 23.05 Creative Writing.** Instructional content is defined in code 23.0501.
- 23.0501 Creative Writing.** A program that focuses on the process and techniques of original composition in various literary forms such as the short story, poetry, the novel, and others. Includes instruction in technical and editorial skills, criticism, and the marketing of finished manuscripts.
- 23.07 American Literature (United States and Canadian.)** Instructional content for this group of programs is defined in codes 23.0701- 23.0702.
- 23.0701 American Literature (United States).** A program that focuses on the literature and literary development, both formal and folkloric, of the United States from the Colonial Era to the present. Includes instruction in period and genre studies, author studies, literary criticism, and regional and oral traditions.
- 23.0702 American Literature (Canadian). (NEW)** A program that focuses on the literature and literary development, both formal and folkloric, of Canada from its origins to the present. Includes instruction in period and genre studies, author studies, literary criticism, and regional and oral traditions.
- 23.08 English Literature (British and Commonwealth).** Instructional content is defined in code 23.0801.
- 23.0801 English Literature (British and Commonwealth).** A program that focuses on the literatures and literary developments of the English-speaking peoples of the British Isles and the British Commonwealth, from the origins of the English language to the present. Includes instruction in period and genre studies, author studies, country and regional specializations, literary criticism, and the study of folkloric traditions.
- 23.10 Speech and Rhetorical Studies.** Instructional content is defined in code 23.1001.
- 23.1001 Speech and Rhetorical Studies.** A program that focuses on human interpersonal communication from the scientific/behavioral and humanistic perspectives. Includes instruction in the theory and physiology of speech, the history of discourse, the structure and analysis of argument and types of public speech, the social role of speech, oral interpretation of literature, interpersonal interactions, and the relation of speech to nonverbal and other forms of message exchanges.
- **Speech Teacher Education.** (Report under 13.1331)
- 23.11 Technical and Business Writing.** Instructional content is defined in code 23.1101.
- 23.1101 Technical and Business Writing.** A program that focuses on the theory, methods, and skills needed for writing and editing scientific, technical and business papers and monographs.
- **Public Relations/Image Management.** (Report under 09.0902)

23.99 English Language and Literature/Letters, Other. Instructional content is defined in code 23.9999.

23.9999 English Language and Literature/Letters, Other. Any instructional program in English language and literature not listed above.

24. LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES. General instructional programs and independent or individualized studies in the liberal arts subjects, the humanities disciplines and the general curriculum.

24.01 Liberal Arts and Sciences, General Studies and Humanities. Instructional content for this group of programs is defined in codes 24.0101- 24.0199.

24.0101 Liberal Arts and Sciences/Liberal Studies. A program that is a structured combination of the arts, biological and physical sciences, social sciences, and humanities, emphasizing breadth of study. Includes instruction in independently designed, individualized, or regular programs.

24.0102 General Studies. An undifferentiated program that includes instruction in the general arts, general science, or unstructured studies.

24.0103 Humanities/Humanistic Studies. A program that focuses on combined studies and research in the humanities subjects as distinguished from the social and physical sciences, emphasizing languages, literatures, art, music, philosophy and religion.

24.0199 Liberal Arts and Sciences, General Studies and Humanities, Other. Any single instructional program in liberal arts and sciences, general studies and humanities not listed above.

25. LIBRARY SCIENCE. Instructional programs that focus on the knowledge and skills required for managing and/or maintaining libraries and related information and record systems, collections and facilities for research and general use.

25.01 Library Science/Librarianship. Instructional content is defined in code 25.0101.

25.0101 Library Science/Librarianship. A program that focuses on the knowledge and skills required to develop, organize, store, retrieve, administer, and facilitate the use of local, remote, and networked collections of information in print, audiovisual, and electronic formats and that prepares individuals for professional service as librarians and information consultants.

----- **Public/Applied History and Archival Administration.** (Report under 54.0105)

----- **Information Science/Studies.** (Report under 11.0401)

25.03 Library Assistant. Instructional content is defined in code 25.0301.

25.0301 Library Assistant/Technician. A program that prepares individuals to assist professional librarians. Includes instruction in principles, systems, processes, and procedures of 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 documents.

----- **Library Science.** (Report under 25.01 Series)

----- **Museology/Museum Studies.** (Report under 30.1401)

25.99 Library Science, Other. Instructional content is defined in code 25.9999.

25.9999 Library Science, Other. Any instructional program in library science not listed above.

26. BIOLOGICAL AND BIOMEDICAL SCIENCES. Instructional programs that focus on the biological sciences and the non-clinical biomedical sciences, and that prepare individuals for research and professional careers as biologists and biomedical scientists.

----- **AGRICULTURE, AGRICULTURAL OPERATIONS AND RELATED SCIENCES.** (Report under 01. Series)

----- **NATURAL RESOURCES AND CONSERVATION.** (Report under 03. Series)

----- **MULTI- AND INTERDISCIPLINARY STUDIES.** (Report under 30. Series)

----- **HEALTH PROFESSIONS AND RELATED CLINICAL SCIENCES.** (Report under 51. Series)

26.01 Biology, General. Instructional content for this group of programs is defined in codes 26.0101 - 26.0102.

26.0101 Biology/Biological Sciences, General. A general program of biology at the introductory, basic level or a program in biology or the biological sciences that is undifferentiated as to title or content. Includes instruction in general biology and programs covering a variety of biological specializations.

26.0102 Biomedical Sciences, General. (NEW) A general, program that focuses on the integrative scientific study of biological issues related to health and medicine, or a program in one or more of the biomedical sciences that is undifferentiated as to title. Includes instruction in any of the basic medical sciences at the research level; biological science research in biomedical faculties; and general studies encompassing a variety of the biomedical disciplines.

26.02 Biochemistry, Biophysics and Molecular Biology. Instructional content for this group of programs is defined in codes 26.0202- 26.0299.

- 26.0202 Biochemistry.** A program that focuses on the scientific study of the chemistry of living systems, their fundamental chemical substances and reactions, and their chemical pathways and information transfer systems, with particular reference to carbohydrates, proteins, lipids, and nucleic acids. Includes instruction in bio-organic chemistry, protein chemistry, bioanalytical chemistry, bioseparations, regulatory biochemistry, enzymology, hormonal chemistry, calorimetry, and research methods and equipment operation.
- 26.0203 Biophysics.** A program that focuses on the application of physics principles to the scientific study the mechanisms of biological processes and assemblies at all levels of complexity. Includes instruction in research methods and equipment operation and applications to subjects such as bioenergetics, biophysical theory and modeling, electrophysics, membrane biology, channels, receptors and transporters, contractility and muscle function, protein shaping and folding, molecular and supramolecular structures and assemblies, and computational science.
- 26.0204 Molecular Biology.** A program that focuses on the scientific study of the structure and function of biological macromolecules and the role of molecular constituents and mechanisms in supramolecular assemblies and cells. Includes instruction in such topics as molecular signalling and transduction, regulation of cell growth, enzyme substrates and mechanisms of enzyme action, DNA-protein interaction, and applications to fields such as biotechnology, genetics, cell biology, and physiology.
(Moved from 26.0402)
- 26.0205 Molecular Biochemistry. (NEW)** A program that focuses on the scientific relationship of physiological function to the structure and actions of macromolecules and supramolecular assemblies such as multienzyme complexes, membranes, and viruses. Includes instruction in the chemical mechanisms of regulation and catalysis, protein synthesis and other syntheses, and biomolecular chemical reactions.
- 26.0206 Molecular Biophysics. (NEW)** A scientific program that focuses on the dynamics and interactions of macromolecules and other three-dimensional ultrastructures, the architecture of supramolecular structures, and energy transfer in biomolecular systems. Includes instruction in energy transduction, structural dynamics, mechanisms of electron and proton transfer in biological systems, bioinformatics, automated analysis, and specialized research techniques.
- 26.0207 Structural Biology. (NEW)** A program that focuses on the scientific study of submolecular and molecular components and assemblies of living systems and how they are organized into functional units such as cells and anatomic tissues. Includes instruction in glycoprotein, carbohydrate, protein, and nucleic acid structures and chemistry; cytoskeletal structure; nuclear and intracellular structures; molecular recognition; molecular chaperones; transcription and folding; multicellular organization; microtubules and microfilaments; cell differentiation; immunophysics; and DNA sequencing.
- 26.0208 Photobiology. (NEW)** A program that focuses on the scientific study of the effects of light energy on living organisms, the manufacture and processing of luminescence by organisms, and the uses of light in biological research. Includes instruction in bioluminescence, chronobiology, photomedicine, environmental photobiology, organic photochemistry, photomorphogenesis, photoreceptors and

photosensitization, molecular mechanics of photosynthesis, phototechnology, vision, ultraviolet radiation, radiation physics, and spectral research methods.

26.0209 **Radiation Biology/Radiobiology.** A program that focuses on the effects of radiation on organisms and biological systems. Includes instruction in particle physics, ionization, and biophysics of radiation perturbations, cellular and organismic repair systems, genetic and pathological effects of radiation, and the measurement of radiation dosages. (*Moved from 26.0611*)

26.0210 **Biochemistry/Biophysics and Molecular Biology. (NEW)** An integrated, combined program that focuses on the structure, function, and dynamic behavior of the components of biological systems at the submolecular, molecular, and supramolecular levels and their influence on biological activity at the cellular, tissue, organ, and organismic levels. Includes instruction in biochemistry, biophysics, structural biology, molecular biology, and research applications and methods appropriate to specific topics.

26.0299 **Biochemistry, Biophysics and Molecular Biology, Other. (NEW)** Any instructional program in biochemistry, biophysics and molecular biology not listed above.

26.03 **Botany/Plant Biology.** Instructional content for this group of programs is defined in codes 26.0301- 26.0399.

---- **Plant Sciences.** (Report under 01.11 Series)

26.0301 **Botany/Plant Biology.** A program that focuses on the scientific study of plants, related microbial organisms, and plant habitats and ecosystem relations. Includes instruction in plant anatomy and structure, phytochemistry, cytology, plant genetics, plant morphology and physiology, plant ecology, plant taxonomy and systematics, paleobotany, and applications of biophysics and molecular biology.

26.0305 **Plant Pathology/Phytopathology.** A program that focuses on the scientific study of plant diseases and plant health, and the development of disease control mechanisms. Includes instruction in plant anatomy and physiology; pathogenesis; molecular plant virology; molecular genetics; bacterial epidemiology; causal agent identification; host/agent interactions; disease resistance and response mechanisms; developing plant disease treatments; disease prevention; and disease physiology and control.

26.0307 **Plant Physiology.** A program that focuses on the scientific study of plant internal dynamics and systems, plant-environment interaction, and plant life cycles and processes. Includes instruction in cell and molecular biology; plant nutrition; plant respiration; plant growth, behavior, and reproduction; photosynthesis; plant systemics; and ecology.

26.0308 **Plant Molecular Biology. (NEW)** A program that focuses on the application of molecular biology, biochemistry, and biophysics to the study of biomolecular structures, functions, and processes specific to plants and plant substances. Includes instruction in the biochemistry of plant cells, nuclear-cytoplasmic interactions, molecular cytostructures,

photosynthesis, plant molecular genetics, and the molecular biology of plant diseases.

26.0399 Botany/Plant Biology, Other. Any instructional program in botany/plant biology not listed above.

26.04 Cell/Cellular Biology and Anatomical Sciences. Instructional content for this group of programs is defined in codes 26.0401- 26.0499.

26.0401 Cell/Cellular Biology and Histology. A program that focuses on the scientific study of the structure, function, and regulation of cells as individual units and as components of larger systems. Includes instruction in cell chemistry, cellular dynamics, cellular replication and reproduction, cell anatomy, membrane function, organelles, cell adhesion and extracellular matrices, cell dynamics and motility, meiosis and mitosis, signal transduction, regulation, recognition and defense mechanisms, the cell cycle, cell metabolism and respiration, gene expression, and studies of cell types and characteristics.

(26.0402) Molecular Biology. (Moved, Report under 26.0204)

26.0403 Anatomy. A program that focuses on the scientific study of organ systems, tissue structures, and whole bodies together with their cellular and structural components and dynamics. Includes instruction in cell biology and histology, structural biology, molecular mechanics, regional and gross anatomy, embryology, neuroanatomy, endocrinology and secretory dynamics, and applications to such topics as aging and disease conditions. (*Moved from 26.0601*)

26.0404 Developmental Biology and Embryology. (NEW) A program that focuses on the scientific study of embryology, development, and growth of animals and human beings. Includes instruction in fertilization, oogenesis, histogenesis, gastrulation, and cell differentiation; embryological development including organ and pattern formation, morphogenesis, gene regulation, cell lineage, and fate maps; disease and defect studies; transgenic and evolutionary models of growth and development; and applications to specific organisms and phyla.

26.0405 Neuroanatomy. (NEW) A program that focuses on the scientific study of structure and function of the brain and central nervous system. Includes instruction in the molecular biology of neural cells and circuits, cognitive biology, neural transmitters and receptors, neuronal signalling and control of physical function, membrane and synapse structure and communication, autonomic function, nervous system circuitry and mapping, anatomy of neurological disease and disorders, brain studies, protein chemistry, and computational biology.

26.0406 Cell/Cellular and Molecular Biology. (NEW) An integrated, combined program that focuses on the scientific study of cells, cellular systems, and the molecular basis of cell structure and function. Includes instruction in cell biology, cell chemistry, molecular biology, biophysics, and structural biology.

26.0407 Cell Biology and Anatomy. (NEW) An integrated, combined program that focuses on the scientific study of cell structure, function, and dynamics within the context of organismic, regional, and gross anatomical systems. Includes instruction in molecular biology, cell

biology and histology, structural biology, anatomy, embryology, endocrinology, and applications to specific systems, diseases, defects, and processes.

26.0499 Cell/Cellular Biology and Anatomical Sciences, Other. Any instructional program in cell/cellular biology and anatomical sciences not listed above.

26.05 Microbiological Sciences and Immunology. Instructional content for this group of programs is defined in codes 16.0502- 16.0599.

[26.0501] Microbiology/Bacteriology. (Deleted, Report under 26.0503)

26.0502 Microbiology, General. (NEW) A program that focuses on the scientific study of unicellular organisms and colonies, and subcellular genetic matter and their ecological interactions with human beings and other life. Includes instruction in microbial genetics, cell biology, cell physiology, virology, pathogenic microbiology, environmental microbiology, immunology, biostatistics, bioinformatics, and laboratory methods including microscopy.

Soil Microbiology. (Report under 01.1203)

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

26.0504 Virology. A program that focuses on the scientific study of subcellular pieces of genetic material, called viruses, that inhabit living cells in parasitical relationships and their role in disease. Includes instruction in virus taxonomy and systematics, viral structures, viral genetics, prions, virus/host cell interaction, viral pathogenesis, and applications to specific topics such as cancer biology. (*Moved from 26.0619*)

26.0505 Parasitology. A program that focuses on the scientific study of biological organisms living in ecologically exploitative and competitive relationships with host organisms, and the role of parasites in causing injury, disease, and environmental damage. Includes instruction in vector biology, immunoparasitology, medical parasitology, molecular biology of parasitical associations, veterinary and comparative parasitology, chemotherapeutics, and ecological and systematic parasitology. (*Moved from 26.0610*)

26.0506 Mycology. (NEW) A program that focuses on the scientific study of fungi, lichenous plants, eukaryotic microorganisms, myxomycetes, and plasmodiophorales and their relationship to diseases in higher plants, animals, and human beings as well as to pharmacologically useful products. Includes instruction in cell and molecular biology; histopathology; fungal growth and behavior; environmental mycology; antifungal sensitivity; mycoses; pathogens and pathogenesis; pharmacological properties; and computer and laboratory research methods.

26.0507 Immunology. A program that focuses on scientific study of the biological mechanisms involved in the pathogenesis of disease, host-pathogen interactions, and host response to disease. Includes instruction in antigen and antibody structure and function, effector mechanisms, receptors, histocompatibility, host-pathogen recognition, disease modeling, autoimmune systems, antibody formation, cytotoxic responses, regulation of immune response, virulence determinants, intercellular signalling, immunosuppression, immunotherapy, immunogenetics, disease markers, transplantation, antibody humanization, and microbial pathogenesis. (*Moved from 26.0618*)

26.0599 *Microbiological Sciences and Immunology, Other. (NEW)* Any instructional program in the microbiological sciences and immunology not listed above.

[26.06] Miscellaneous Biological Specializations. (Deleted).

(26.0601) Anatomy. (Moved, Report under 26.0403)

(26.0603) Ecology. (Moved, Report under 26.1301)

(26.0607) Marine/Aquatic Biology (Moved, Report under 26.1302).

(26.0608) Neuroscience. (Moved, Report under 30.2401)

(26.0609) Nutrition Sciences. (Moved, Report under 30.1901)

(26.0610) Parasitology. (Moved, Report under 26.0505)

(26.0611) Radiation Biology/Radiobiology. (Moved, Report under 26.0209)

(26.0612) Toxicology. (Moved, Report under 26.1004)

[26.0613] Genetics, Plant and Animal. (Deleted, Report under code 26.0804 or 26.0805)

(26.0614) Biometrics. (Moved, Report under 26.1101)

(26.0615) Biostatistics. (Moved, Report under 26.1102)

(26.0616) Biotechnology. (Moved, Report under 26.1201)

(26.0617) Evolutionary Biology. (Moved, Report under 26.1303)

(26.0618) Biological Immunology. (Moved, Report under 26.0507)

(26.0619) Virology. (Moved, Report under 26.0504)

[26.0699] Miscellaneous Biological Specializations, Other. (Deleted).

26.07 Zoology/Animal Biology. Instructional content for this group of programs is defined in codes 26.0701– 26.0799.

26.0701 Zoology/Animal Biology. A general program that focuses on the scientific study of the biology of animal species and phyla, with reference to their molecular and cellular systems, anatomy, physiology, and

behavior. Includes instruction in molecular and cell biology, microbiology, anatomy and physiology, ecology and behavior, evolutionary biology, and applications to specific species and phyla.

26.0702 Entomology. A program that focuses on the scientific study of insect species and populations in respect of their life cycles, morphology, genetics, physiology, ecology, taxonomy, population dynamics, and environmental and economic impacts. Includes instruction in applicable biological and physical sciences as well as insect toxicology and the biochemical control of insect populations.

[26.0704] Pathology, Human and Animal. (Deleted, Report under 26.0910)

(26.0705) Pharmacology. (Moved, Report under 26.1001)

[26.0706] Physiology, Human and Animal. (Deleted, Report under 26.0707 or 26.0901)

26.0707 Animal Physiology. (NEW) A program that focuses on the scientific study of function, morphology, regulation, and intercellular communications and dynamics within vertebrate and invertebrate in animal species, with comparative applications to homo sapiens and its relatives and antecedents. Includes instruction in reproduction, growth, lactation, digestion, performance, behavioral adaptation, sensory perception, motor action, phylogenetics, biotic and abiotic function, membrane biology, and related aspects of biochemistry and biophysics.

Physiology, Pathology and Related Sciences. (Report under 26.09 Series)

26.0708 Animal Behavior and Ethology. (NEW) A program that focuses on the scientific study of the psychological and neurological bases of animal sensation, perception, cognition, behavior, and behavioral interactions within and outside the species. Includes instruction in ethology, behavioral neuroscience, neurobiology, behavioral evolution, cognition and sensory perception, motivators, learning and instinct, hormonal controls, reproductive and developmental biology, community ecology, functional behavior, and applications to specific behaviors and patterns as well as to specific phyla and species.

26.0709 Wildlife Biology. (NEW) A program that focuses on the application of biological principles to the study of vertebrate wildlife, wildlife habitats, and related ecosystems in remote and urban areas. Includes instruction in animal ecology; adaptational biology; urban ecosystems; natural and artificial habitat management; limnology; wildlife pathology; and vertebrate zoological specializations such as mammalogy, herpetology, ichthyology, ornithology, and others.

26.0799 Zoology/Animal Biology, Other. Any instructional program in zoology/animal biology not listed above.

26.08 Genetics. (NEW) Instructional content for this group of programs is defined in codes 26.0801- 26.0899.

- 26.0801** **Genetics, General. (NEW)** A general program that focuses on the scientific study of the organization, recombination, function, regulation, and transmission of heritable information in biological organisms at all levels of complexity. Includes instruction in Mendelian genetics, mechanisms of gene regulation, chromosome structure and replication, epigenetic phenomena, DNA repair and recombination, sex determination, genetic interactions between genomes, and molecular evolution.
- 26.0802** **Molecular Genetics. (NEW)** A program that focuses on the scientific study of the molecular mechanisms regulating gene expression, information transfer, replication, and stability in DNA and RNA. Includes instruction in prokaryotic genetics and gene expression; development and evolution of gene sequences and anatomical forms; biochemistry of gene replication and recombination; transcription and processing; genomics; chromatin architecture; and DNA/RNA structure.
- 26.0803** **Microbial and Eukaryotic Genetics. (NEW)** A program that focuses on the scientific study of the genetics of viruses, infectious agents, organelles, nuclear genomes, eubacteria, archaeobacteria, and eukaryotic organisms. Includes instruction in molecular genetics and evolution; parasitic and symbiotic interaction at the genetic level; epigenetic phenomena; microbial interactions; and genomics.
- 26.0804** **Animal Genetics. (NEW)** A program that focuses on the scientific study of the genetics of multicellular animal life forms from the experimental, comparative, and clinical (veterinary and medical) viewpoints. Includes instruction in molecular genetics, gene expression, gene regulation, genomics, epigenetic phenomena, DNA recombination and repair, genetic interactions at the microbial and higher levels, and molecular evolution.
- **Agricultural Animal Breeding.** (Report under 01.0902)
- **Human /Medical Genetics.** (Report under 26.0806)
- 26.0805** **Plant Genetics. (NEW)** A program that focuses on the scientific study of the genetics of multicellular plants and fungi as related to botanical research as well as to applications in comparative genetics, ecology and evolutionary studies, clinical studies, and industrial research. Includes instruction in molecular genetics, gene expression, gene regulation, genomics, epigenetic phenomena, DNA recombination and repair, genetic interactions at the microbial and higher levels, and molecular evolution.
- **Agricultural and Horticultural Plant Breeding.** (Report under 01.1104)
- 26.0806** **Human/Medical Genetics.** A program that focuses on the scientific study of human genetics from the standpoint of medical applications such as clinical diagnosis, genetic engineering and therapy, transplantation, and the study of genetic diseases and disabilities and their defense. Includes instruction in human molecular genetics; genetic factors causing disease; changes in gene expression during development, differentiation, and pathogenesis; recombinant DNA; gene therapy; clinical genetics; genetic epidemiology; immunogenetics; cytogenetics; and genetics of specific disorders and diseases.
(Moved from 51.1306)

----- **Genetic Counseling/Counselor.** (Report under 51.1509)

----- **Gene/Genetic Therapy.** (Report under 51.0914)

26.0899 **Genetics, Other. (NEW)** Any instructional program in genetics not listed above.

26.09 **Physiology, Pathology and Related Sciences. (NEW)** Instructional content for this group of programs is defined in codes 26.0901- 26.0999.

26.0901 **Physiology, General. (NEW)** A general program that focuses on the scientific study of the functional dynamics, morphology, and biochemical and biophysical communications within organisms and between living systems at all levels of complexity and integration. Includes instruction in reproduction, growth, hormonal action, vascular function, respiration, digestion, sensory perception and processing, sensorimotor integration, signal encoding and conveyance, homeostasis, physical function and malfunction, evolutionary physiology, and disease processes.

26.0902 **Molecular Physiology. (NEW)** A program that focuses on the scientific study of dynamic interactive processes and biochemical communications at the subcellular level. Includes instruction in ion channels and transporters, molecular signalling pathways, endocrine control and regulation, genetic information transfer, homeostasis and molecular control systems, electrophysiology and sensory mechanisms, protein synthesis, and applicable research methods and technologies.

26.0903 **Cell Physiology. (NEW)** A program that focuses on the scientific study of physiological processes operating within and among cells, and intracellular communication and behavior, in the context of larger systems and whole organisms. Includes instruction in cell and molecular biology, molecular physiology, cell cycle control, signal transduction, protein structure, membrane biochemistry and structure, ion channel physics, cell respiration and digestion, secretory functions, cell adhesion and communication, information encoding and decoding, and the relation of cell physiology to tissue, organ, and organismic functioning.

26.0904 **Endocrinology. (NEW)** A program that focuses on the scientific study of the composition, manufacture, and secretion of protein compounds by cells and glands and the role of endocrine substances in bodily processes. Includes instruction in protein chemistry, protein secretion, membrane biogenesis and transfer methods, cellular communication, gene and cell regulation, cytochemistry, fractionation, radioautography, and applications such as neuroendocrinology.

26.0905 **Reproductive Biology. (NEW)** A program that focuses on the scientific study of reproductive processes and biogenesis in animals and human beings. Includes instruction in reproductive ecology and behavior, reproductive system physiology, endocrinology, developmental biology, neuroendocrinology, evolution and types of reproductive systems, reproductive genetics, physiopathology of reproductive processes, and applications of molecular biology and biophysics to the study of reproductive physiology.

26.0906 **Neurobiology and Neurophysiology. (NEW)** A program that focuses on the scientific study of the cellular and molecular basis of the lower and

higher neural functions in animals and human beings, organ system behavior and the immune response, and the control of physiological systems. Includes instruction in computational biology, computer modeling, protein biochemistry, electrophysiology, morphological basis of behavior, neural signal transduction and reception, synaptic activity, neurotransmission, sensory perception and sensorimotor interaction, inflammation and neurodegeneration, neurological and autoimmune disease, immune response, maintenance of homeostasis, and autonomic function.

----- **Neuroscience.** (Report under 30.2401)

----- **Biopsychology.** (Report under 30.1001)

26.0907 **Cardiovascular Science. (NEW)** A program that focuses on the scientific study of the structure and functioning of the heart, vascular system, and blood in animals and human beings and the disorders and diseases associated with the cardiovascular system. Includes instruction in cardiovascular physiology, blood physiology, vasculature, vascular metabolism, neural control of cardiovascular function, microvascular permeability and membrane transport, cardiac contraction mechanisms, homeostasis, and applications to topics such as arteriosclerosis, heart disease, diabetes, vascular remodeling, transplantation, transfusion, and pacemakers and artificial organs.

26.0908 **Exercise Physiology. (NEW)** A program that focuses on the scientific study of the physiological processes involved in physical or motor activity, including sensorimotor interactions, response mechanisms, and the effects of injury, disease, and disability. Includes instruction in muscular and skeletal anatomy; molecular and cellular basis of muscle contraction; fuel utilization; neurophysiology of motor mechanics; systemic physiological responses (respiration, blood flow, endocrine secretions, and others); fatigue and exhaustion; muscle and body training; physiology of specific exercises and activities; physiology of injury; and the effects of disabilities and disease.

----- **Kinesiology and Exercise Science.** (Report under 31.0505)

26.0909 **Vision Science/Physiological Optics. (NEW)** A program that focuses on the scientific study of vision, visual processes, and related phenomena and clinical research and treatment modalities. Includes instruction in ocular anatomy and physiology, microbiology of the eye, electrophysiology, neurophysiology, corneal physiology, photochemistry, psychophysics, visual biophysics and motor systems, sensory mechanisms and photoreception, eye circulation and metabolism, geometric and physical optics, ocular development across the life span, visual stimuli and perception, color vision, eye motility, biometrics and measurement techniques, visual pathology, and environmental issues.

26.0910 **Pathology/Experimental Pathology. (NEW)** A program that focuses on the scientific study of the expression, initiation, maintenance and progression of tissue injury and disease, including death, and the relationship of pathogenesis to fundamental molecular and cellular mechanisms. Includes instruction in immunology, microbiology, gene expression, inflammation, cell injury, apoptosis, immunopathology, molecular markers of disease and toxins, neoplasia, growth regulation, and organ- and system-specific investigations.

- 26.0911** ***Oncology and Cancer Biology. (NEW)*** A program that focuses on the scientific study of carcinogens; the onset of malignancy in cells, tissues, blood, and organs; the genetics of cancer; the anatomy and physiology of cancer cells; and the study of cancer behaviors and treatments. Includes instruction in gene expression; oncogenes and tumor suppressor genes; viral genes and cancer proliferation; regulation of signal transduction; cancer proteins; hormonal and growth factors in cancer cells; tumor promotion, progression, and metastasis; carcinogen receptors and metabolism; carcinogen ecology; immunological targeting; and studies of genetic, chemical, radiologic and other treatment therapies.
- 26.0999** ***Physiology, Pathology, and Related Sciences, Other. (NEW)*** Any instructional program in physiology, pathology, and related sciences not listed above.
- 26.10** ***Pharmacology and Toxicology. (NEW)*** Instructional content for this group of programs is defined in codes 26.1001- 26.1099.
- 26.1001** ***Pharmacology.*** A program that focuses on the scientific study of drug interactions on biological systems and organisms and the sources, chemical properties, biological effects, and therapeutic uses of drugs. Includes instruction in pharmacodynamics, pharmacokinetics, toxicology, drug therapeutics, drug action, bodily responses to drug events, biochemical proliferation and differentiation, apoptosis, cell biology, medicinal chemistry, and studies of specific drugs and drug interactions. *(Moved from 26.0705)*
- ***Veterinary Toxicology and Pharmacology.*** (Report under 51.2506)
- 26.1002** ***Molecular Pharmacology. (NEW)*** A program that focuses on the scientific study of the biochemical and biophysical characteristics of drugs at the molecular level and their interaction with, and effects on, biological macromolecules and cellular structures and processes. Includes instruction in molecular biology and biophysics; pharmacology of signal transduction, transmitters, and protein synthesis and release; receptors, protein interaction and binding; drug discovery and recognition; molecular toxicology; drug design; pharmacodynamics; developmental genetics; and studies of therapeutic strategies.
- 26.1003** ***Neuropharmacology. (NEW)*** A program that focuses on the scientific study of drugs that modify the function of the brain and central nervous system, the effects of such drugs on health, disease, perception, motor action, and behavior; and the development of countermeasures and treatment therapies. Includes instruction in neuroanatomy, neurophysiology, behavioral neuroscience, neurobiochemistry, neuropathology, the mechanisms of brain function, medicinal chemistry, pharmaceuticals, and studies of specific drugs and drug therapies.
- 26.1004** ***Toxicology.*** A program that focuses on the scientific study of poisons and other biohazards; their interactions with organisms and their food and respiratory systems; and their prevention, management, and counteraction. Includes instruction in toxicological biochemistry, toxic agents and transporters, toxin fate, toxicokinetics and metabolism, toxin classification, molecular toxic mechanisms, extracellular matrices and cell function, bacterial pathogenesis and mutagenesis, pathophysiology and apoptosis, cell stress and injury, studies of specific toxins, and

studies of specific organ systems and physiological functions in relation to toxicological problems. (*Moved from 26.0612*)

- 26.1005** ***Molecular Toxicology. (NEW)*** A program that focuses on the scientific study of the genetic determinants of susceptibility to external pollutants and poisons; the interaction of toxic agents with biological systems at the molecular and cellular levels; and the development of countermeasures and treatments. Includes instruction in pharmacogenetics, biomolecular structure, gene expression and regulation, transgenic modeling, toxic events signalling, transcriptional activation, mutagenesis and carcinogenesis, pulmonary toxicology, xenobiotic metabolism, oxidative stress, risk assessment, molecular dosimetry, and studies of specific toxins and treatment therapies.
- 26.1006** ***Environmental Toxicology. (NEW)*** A program that focuses on the scientific study of the health effects associated with exposure to toxic chemicals and systems occurring in the natural, work, and living environments; the management of environmental toxins and toxicity; and the development of protections for humans, animals, and plants. Includes instruction in applied ecology; microbiology; toxin transport, fate, and degradation; dermal toxicology; reproductive and genetic toxicology; atmospheric and environmental chemistry; metals toxicology; environmental mutagens and biotransformation; nutrient interaction; chemical sensitivity, disorders, and disease; risk assessment; animal waste management; environmental health; and hazardous materials management.
- 26.1007** ***Pharmacology and Toxicology. (NEW)*** A program with an integrated, combined approach to the study of pharmacological and toxicological issues in biology and the biomedical sciences. Includes instruction in topics such as solvents, xenobiotic metabolism, chemical toxicity, neurotoxicology, immunopharmacology, biotransformation, tissue culture and in vitro studies, biomolecular analysis, bioactivation and inactivation, enzyme regulation, chemoprevention and chemotherapy, industrial and chemical studies, radiation health, and bioinformatics.
- 26.1099** ***Pharmacology and Toxicology, Other. (NEW)*** Any instructional program in pharmacology and toxicology not listed above.
- 26.11** ***Biomathematics and Bioinformatics. (NEW)*** Instructional content for this group of programs is defined in codes 26.1101- 26.1199.
- 26.1101** ***Biometry/Biometrics.*** A program that focuses on the application of statistics and other computational methods to the study of problems in the biological sciences and related fields in agriculture and natural resources. Includes instruction in computational biology, mathematical statistics, matrix algebra, applied calculus, experimental design, linear modeling, sampling theory, stochastic processes, spatial and temporal analysis, longitudinal analysis, sparse/unbalanced data and complex error, and applications to such topics as population genetics, animal breeding, forest genetics, population dynamics, wildlife biometry, ecology, and agricultural and natural resource management.
(*Moved from 26.0614*)
- 26.1102** ***Biostatistics.*** A program that focuses on the application of descriptive and inferential statistics to biomedical research and clinical, public health, and industrial issues related to human populations.

Includes instruction in mathematical statistics, modeling, clinical trials methodology, disease and survival analysis, longitudinal analysis, missing data analysis, spatial analysis, computer tomography, biostatistics consulting, and applications to such topics as genetics, oncology, pharmacokinetics, physiology, neurobiology, and biophysics. (Moved from 26.0615)

26.1103 **Bioinformatics. (NEW)** A program that focuses on the application of computer-based technologies and services to biological, biomedical, and biotechnology research. Includes instruction in algorithms, network architecture, principles of software design, human interface design, usability studies, search strategies, database management and data mining, digital image processing, computer graphics and animation, CAD, computer programming, and applications to experimental design and analysis and to specific quantitative, modeling, and analytical studies in the various biological specializations.

----- **Medical Informatics.** (Report under 51.2706)

26.1199 **Biomathematics and Bioinformatics, Other. (NEW)** Any instructional program in biomathematics and bioinformatics not listed above.

26.12 **Biotechnology. (NEW)** Instructional content is defined in 26.1201.

26.1201 **Biotechnology.** A program that focuses on the application of the biological sciences, biochemistry, and genetics to the preparation of new and enhanced agricultural, environmental, clinical, and industrial products, including the commercial exploitation of microbes, plants, and animals. Includes instruction in bioinformatics, gene identification, phylogenetics and comparative genomics, bioinorganic chemistry, immunoassaying, DNA sequencing, xenotransplantation, genetic engineering, industrial microbiology, drug and biologic development, enzyme-based production processes, patent law, biotechnology management and marketing, applicable regulations, and biotechnology ethics. (Moved from 26.0616)

26.13 **Ecology, Evolution, Systematics, and Population Biology. (NEW)** Instructional content for this group of programs is defined in codes 26.1301 – 26.1399.

26.1301 **Ecology.** A program that focuses on the scientific study of the relationships and interactions of small-scale biological systems, such as organisms, to each other, to complex and whole systems, and to the physical and other non-biological aspects of their environments. Includes instruction in biogeochemistry; landscape and/or marine/aquatic dynamics; decomposition; global and regional elemental budgets; biotic and abiotic regulation of nutrient cycles; ecophysiology; ecosystem resilience, disturbance, and succession; community and habitat dynamics; organismal interactions (co-evolution, competition, predation); paleoecology, and evolutionary ecology. (Moved from 26.0603)

26.1302 **Marine Biology and Biological Oceanography.** A program that focuses on the scientific study of the ecology and behavior of microbes, plants, and animals inhabiting oceans, coastal waters, and saltwater wetlands and their interactions with the physical environment. Includes instruction in chemical, physical, and geological oceanography; molecular, cellular, and biochemical studies; marine microbiology; marine botany; ichthyology; mammalogy; marine population dynamics

and biodiversity; reproductive biology; studies of specific species, phyla, habitats, and ecosystems; marine paleocology and paleontology; and applications to fields such as fisheries science and biotechnology.
(Moved from 26.0607)

- 26.1303** **Evolutionary Biology.** A program that focuses on the scientific study of the genetic, developmental, functional, and morphological patterns and processes, and theoretical principles; and the emergence and mutation of organisms over time. Includes instruction in molecular and morphological systematics; genetics and development; evolutionary transformation; paleobiology and paleontology; morphogenesis; mutation; locomotor, biomechanical and craniodental form and function; evolutionary theory; and systematic biology. (Moved from 26.0617)
- 26.1304** **Aquatic Biology/Limnology. (NEW)** A program that focuses on the scientific study of the ecology and behavior of microbes, plants, and animals inhabiting inland fresh waters such as lakes, ponds, rivers, creeks, estuaries, and wetlands. Includes instruction in geology and hydrology; aquatic ecosystems; microbiology; mycology; botany; ichthyology; mammalogy; population biology and biodiversity; studies of specific species, phyla, and habitats; and applications to fields such as natural resources conservation, fisheries science, and biotechnology.
- 26.1305** **Environmental Biology. (NEW)** A program that focuses on the scientific study of the origins, functions, relationships, interactions, and natural history of living populations, communities, species, and ecosystems in relation to dynamic environmental processes. Includes instruction in biodiversity, molecular genetic and genomic evolution, mesoscale ecology, computational biology and modeling, conservation biology, local and global environmental change, and restoration ecology.
- 26.1306** **Population Biology. (NEW)** A program that focuses on the scientific study of the natural history, life cycle behavior, and ecosystem dynamics of single species and multi-species communities, and the patterns and causes of diversity within and among such populations. Includes instruction in biostatistics, population dynamics, population and quantitative genetics, RNA and DNA sequences, genomics, evolutionary ecology, natural adaptation and hybridization, geographic differentiation, life history and life cycle studies, and animal and plant demography.
- 26.1307** **Conservation Biology. (NEW)** A program that focuses on the application of the biological sciences to the specific problems of biodiversity, species preservation, ecological sustainability, and habitat fragmentation in the face of advancing human social, economic, and industrial pressures. Includes instruction in ecology, environmental science, biological systems, extinction theory, human-animal and human-plant interaction, ecosystem science and management, wetland conservation, field biology, forest and wildlife biology, and natural history.
- 26.1308** **Systematic Biology/Biological Systematics. (NEW)** A program that focuses on the theoretical and empirical study of the principles and processes underlying the origin and maintenance of biological taxonomic diversity; related biogeographical and evolutionary patterns; and studies of the origin, diversification, distribution, and extinction of species and lineages. Includes instruction in phylogenetic analysis, structural development and molecular evolution, classification and taxonomic

theory, biological nomenclature, taxonomic assignment, evolutionary theory, biological surveys and inventories, computer modeling, and database building.

26.1309 **Epidemiology.** A program that focuses on the scientific study of disease, disability, and trauma patterns within and across populations and the development of health management mechanisms to prevent and control disease outbreaks and injurious behaviors. Includes instruction in biostatistics, biochemistry, molecular biology, immunology, disease and injury determinants, genetic disease and disability factors, behavioral studies, health services research, environmental disease and injury factors, and population studies. (*Moved from 51.2203*)

26.1399 **Ecology, Evolution, Systematics and Population Biology, Other. (NEW)** Any instructional program in ecology, evolution, and systematics not listed above.

26.99 **Biological and Biomedical Sciences, Other.** Instructional content is defined in code 26.9999.

26.9999 **Biological and Biomedical Sciences, Other.** Any instructional program in the biological and biomedical sciences not listed above.

27. MATHEMATICS AND STATISTICS. Instructional programs that focus on the systematic study of logical symbolic language and its applications.

27.01 **Mathematics.** Instructional content for this group of programs is defined in codes 27.0101 - 27.0199.

27.0101 **Mathematics, General.** A general program that focuses on the analysis of quantities, magnitudes, forms, and their relationships, using symbolic logic and language. Includes instruction in algebra, calculus, functional analysis, geometry, number theory, logic, topology and other mathematical specializations.

27.0102 **Algebra and Number Theory. (NEW)** A program that focuses on the expression of quantities and their relationships by means of symbols, vectors, matrices, and equations, and the properties of integers. Includes instruction in algebraic structures, quadratic and automorphic forms, combinatorics, linear algebra, and algebraic geometry.

27.0103 **Analysis and Functional Analysis. (NEW)** A program that focuses on the properties and behavior of equations, multivariate solutions, functions, and dynamic systems. Includes instruction in differential equations, variation, approximations, complex variables, integrals, harmonic analysis and wavelet theory, dynamic systems, and applications to mathematical physics.

27.0104 **Geometry/Geometric Analysis. (NEW)** A program that focuses on the properties, measurements, and relationships pertaining to points, lines, angles, surfaces, and solids. Includes instruction in global analysis, differential geometry, Euclidian and Non-Euclidian geometry, set theory, manifolds, integral geometry, and applications to algebra and other topics.

- 27.0105** **Topology and Foundations. (NEW)** A program that focuses on the properties of unaltered geometric configurations under conditions of continuous, multi-directional transformations. Includes instruction in mathematical logic, proof theory, model theory, set theory, combinatorics, continua, homotopy, homology, links, and transformation actions.
- 27.0199** **Mathematics, Other. (NEW)** Any program in mathematics not listed above.
- 27.03** **Applied Mathematics.** Instructional content for this group of programs is defined in codes 27.0301- 27.0399.
- 27.0301** **Applied Mathematics.** A program that focuses on the application of mathematics and statistics to the solution of functional problems in fields such as engineering and the applied sciences. Includes instruction in natural phenomena modeling continuum mechanics, reaction-diffusion, wave propagation, dynamic systems, numerical analysis, controlled theory, asymptotic methods, variation, optimization theory, inverse problems, and applications to specific scientific and industrial topics.
- **Econometrics/Quantitative Economics.** (Report under 45.0603)
- (27.0302)** **Operations Research.** (Moved, Report under 14.3701)
- 27.0303** **Computational Mathematics. (NEW)** A program that focuses on the application of mathematics to the theory, architecture, and design of computers, computational techniques, and algorithms. Includes instruction in computer theory, cybernetics, numerical analysis, algorithm development, binary structures, combinatorics, advanced statistics, and related topics.
- 27.0399** **Applied Mathematics, Other.** Any instructional program in applied mathematics not listed above.
- 27.05** **Statistics.** Instructional content for this group of programs is defined in codes 27.0501- 27.0599.
- 27.0501** **Statistics, General.** A general program that focuses on the relationships between groups of measurements, and similarities and differences, using probability theory and techniques derived from it. Includes instruction in the principles in probability theory, binomial distribution, regression analysis, standard deviation, stochastic processes, Monte Carlo method, Bayesian statistics, non-parametric statistics, sampling theory, and statistical techniques.
- **Educational Statistics and Research Methods.** (Report under 13.0603)
- **Biometry/Biometrics.** (Report under 26.1101)
- **Biostatistics.** (Report under 26.1102)
- **Psychometrics and Quantitative Psychology.** (Report under 42.1901)

----- **Demography/Population Studies.** (Report under 45.0501)

----- **Actuarial Science.** (Report under 52.1304)

27.0502 **Mathematical Statistics and Probability. (NEW)** A program that focuses on the mathematical theory underlying statistical methods and their use. Includes instruction in probability theory parametric and non-parametric inference, sequential analysis, multivariate analysis, Bayesian analysis, experimental design, time series analysis, resampling, robust statistics, limit theory, infinite particle systems, stochastic processes, martingales, Markov processes, and Banach spaces.

27.0599 **Statistics, Other. (NEW)** Any instructional program in statistics not listed above.

27.99 **Mathematics and Statistics, Other.** Instructional content is defined in code 27.9999.

27.9999 **Mathematics and Statistics, Other.** Any instructional program in mathematics and statistics not listed above.

28. Programs for Series 28. (Reserve Officer Training Corps [ROTC] programs) are located in chapter IV (beginning on page 244).

29. MILITARY TECHNOLOGIES. Instructional programs that prepare individuals in specialized and advanced subject matter for the armed services and related national security organizations.

29.01 **Military Technologies.** Instructional content is defined in code 29.0101.

29.0101 **Military Technologies.** A program that prepares individuals to undertake advanced and specialized leadership and technical responsibilities for the armed services and related national security organizations. Includes instruction in such areas as weapons systems and technology, communications, intelligence, management, logistics, and strategy.

30. MULTI/INTERDISCIPLINARY STUDIES. Instructional programs that derive from two or more distinct programs to provide a cross-cutting focus on a subject concentration that is not subsumed under a single discipline or occupational field.

----- **AREA, ETHNIC, CULTURAL, AND GENDER STUDIES.** (Report under 05. Series)

30.01 **Biological and Physical Sciences.** Instructional content is defined in code 30.0101.

30.0101 **Biological and Physical Sciences.** A program that is either a general synthesis of one or more of the biological and physical sciences, or a specialization which draws from the biological and physical sciences.

30.05 **Peace Studies and Conflict Resolution.** Instructional content is defined in code 30.0501.

- **PSYCHOLOGY.** (Report under 42. Series)
- **SOCIAL SCIENCES.** (Report under 45. Series)
- **HISTORY.** (Report under 54. Series)
- 30.0501** **Peace Studies and Conflict Resolution.** A program that focuses on the origins, resolution and prevention of international and inter-group conflicts. Includes instruction in peace research methods and related social scientific and psychological knowledge bases.
 - **International Relations and Affairs.** (Report under 45.0901)
- 30.06** **Systems Science and Theory.** Instructional content is defined in code 30.0601.
 - 30.0601** **Systems Science and Theory.** A program with a multidisciplinary approach to the analysis and solution of complex problems, requiring a combined approach using data and models from the natural, social, technological, behavioral and life sciences, and other specialized fields.
 - **Systems Engineering.** (Report under 14.2701)
 - **Information Science/Studies.** (Report under 11.0401)
- 30.08** **Mathematics and Computer Science.** Instructional content is defined in code 30.0801.
 - 30.0801** **Mathematics and Computer Science.** A program with a general synthesis of mathematics and computer science or a specialization which draws from mathematics and computer science.
- 30.10** **Biopsychology.** Instructional content is defined in code 30.1001.
 - **BIOLOGICAL SCIENCES/BIOMEDICAL SCIENCES.** (Report under 26. Series)
 - 30.1001** **Biopsychology.** A program that focuses on biological and psychological linkages, especially the linkages between biochemical and biophysical activity and the functioning of the central nervous system.
 - **Physiological Psychology/Psychobiology.** (Report under 42.1101)
- 30.11** **Gerontology.** Instructional content is defined in code 30.1101.
 - 30.1101** **Gerontology.** A program that focuses on the human aging process and aged human populations, using the knowledge and methodologies of the social sciences, psychology and the biological and health sciences.
 - **Adult Development and Aging** (Report under 19.0702)
 - **Geropsychology.** (Report under 42.2201)
 - **Social Work.** (Report under 44.0701)

----- **Adult Health Nursing.** (Report under 51.1603)

30.12 Historic Preservation and Conservation. Instructional content for this group of programs is defined in codes 30.1201- 30.1299.

30.1201 Historic Preservation and Conservation. A program that focuses on the architectural design principles and building techniques used in historic structures and environments, and the process of saving and restoring old buildings and districts for contemporary use and enjoyment. Includes instruction in architectural history; building conservation techniques; real estate, land-use and tax laws and codes; economics and public policy; and public relations.

30.1202 Cultural Resource Management and Policy Analysis. (NEW) A program that focuses on the application of cultural studies, public policy analysis, and management skills to planning, promoting, and implementing programs to preserve and protect cultural heritage sites and artifacts. Includes instruction in historical preservation and conservation, business management, policy analysis, applied economics, public relations, applied history, historical archaeology, and environmental impact studies.

30.1299 Historic Preservation and Conservation, Other. (NEW) Any instructional program that focuses on architectural design and building techniques for historic and restored structures not listed above.

30.13 Medieval and Renaissance Studies. Instructional content is defined in code 30.1301.

30.1301 Medieval and Renaissance Studies. A program that focuses on the study of the Medieval and Renaissance periods in European and circum-Mediterranean history from the perspective of various disciplines in the humanities and social sciences, including history and archeology, as well as studies of period art and music.

30.14 Museology/Museum Studies. Instructional content is defined in code 30.1401.

30.1401 Museology/Museum Studies. A program that focuses on the attitudes, knowledge, and skills required to develop, prepare, organize, administer, conserve, store and retrieve artifacts, exhibits and entire collections in museums and galleries, and that prepares individuals to assume curatorial, technical and managerial positions in museums. Includes instruction in institutional management, acquisition, exhibit design, conservation, packing techniques, and public relations.

30.15 Science, Technology and Society. Instructional content is defined in code 30.1501.

30.1501 Science, Technology and Society. A program that focuses on the contemporary social and public policy ramifications of science and technology, the interrelationship of science and engineering with the public policy process, and the social and ethical dimensions of scientific and technological enterprises.

- 30.16 Accounting and Computer Science. (NEW)** Instructional content is defined in code 30.1601.
- 30.1601 Accounting and Computer Science. (NEW)** A program that combines accounting with computer science and/or computer studies.
- 30.17 Behavioral Sciences. (NEW)** Instructional content is defined in code 30.1701.
- 30.1701 Behavioral Sciences. (NEW)** A program with a combined or undifferentiated focus on the social sciences, psychology, and biomedical sciences to study complex problems of human individual and social growth and behavior.
- 30.18 Natural Sciences. (NEW)** Instructional content is defined in code 30.1801.
- 30.1801 Natural Sciences. (NEW)** A program with a combined or undifferentiated focus on one or more of the physical and biological sciences.
- 30.19 Nutrition Sciences. (NEW)** Instructional content is defined in code 30.1901.
- 30.1901 Nutrition Sciences.** A scientific program that focuses on the utilization of food for human growth and metabolism, in both normal and dysfunctional states, from the interdisciplinary perspective of the agricultural, human, biological, and biomedical sciences. Includes instruction in food science, biochemistry, physiology, dietetics, food and nutrition studies, biotechnology, biophysics, and the clinical sciences.
(Moved from 26.0609)
- 30.20 International/Global Studies. (NEW)** Instructional content is defined in code 30.2001.
- 30.2001 International/Global Studies. (NEW)** A program that focuses on global and international issues from the perspective of the social sciences, social services, and related fields.
- 30.21 Holocaust and Related Studies. (NEW)** Instructional content defined in 30.2101.
- 30.2101 Holocaust and Related Studies. (NEW)** A program that focuses on genocide in human history with particular reference to Twentieth Century genocides such as that of the Ottoman Armenians during World War I and the Nazi Holocaust during World War II. Programs also focus on topics such as survivor studies and counseling, war crimes research and prevention, reconciliation and compensation, ethical and spiritual issues, holocaust art and literature, and legacy and effect in relation to subsequent generations.
- 30.22 Classical and Ancient Studies. (NEW)** Instructional content for this group of programs is defined in codes 30.2201- 30.2202.
- 30.2201 Ancient Studies/Civilization. (NEW)** A program that focuses on Western and Non-Western cultures and related topics in the periods of Pre-history and Antiquity. Includes such disciplines as ancient

languages, archeology, history, art history, geography, population studies, environmental studies, religious studies, and the social sciences.

30.2202 **Classical, Ancient Mediterranean and Near Eastern Studies and Archaeology. (NEW)** A program that focuses on the cultures, environment, and history of the ancient Near East, Europe, and the Mediterranean basin from the perspective of the humanities and social sciences, including archaeology.

30.23 **Intercultural/Multicultural and Diversity Studies. (NEW)** Instructional content is defined in code 30.2301.

30.2301 **Intercultural/Multicultural and Diversity Studies. (NEW)** A program that focuses on the dynamic social relations between and among majority and minority groups and different minority groups, and ways to promote mutual tolerance, inter-group cooperation, and the leadership and management of diverse groups and diversity issues in family, educational, recreational, and work settings. Includes instruction in ethnic and cultural studies, group psychology, sociology, anthropology, conflict resolution, human services and resources, and applications to various functional environments.

30.24 **Neuroscience. (NEW)** Instructional content is defined in code 30.2401.

30.2401 **Neuroscience.** A program that focuses on the interdisciplinary scientific study of the molecular, structural, physiologic, cognitive, and behavioral aspects of the brain and nervous system. Includes instruction in molecular and cellular neuroscience, brain science, anatomy and physiology of the central nervous system, molecular and biochemical bases of information processing, behavioral neuroscience, biology of neuropsychiatric disorders, and applications to the clinical sciences and biomedical engineering. (*Moved from 26.0608*)

30.25 **Cognitive Science. (NEW)** Instructional content is defined in code 30.2501.

30.2501 **Cognitive Science. (NEW)** A program that focuses on the study of the mind and the nature of intelligence from the interdisciplinary perspectives of computer science, philosophy, mathematics, psychology, neuroscience, and other disciplines. Includes instruction in mathematics and logic, cognitive process modeling, dynamic systems, learning theories, brain and cognition, neural networking, programming, and applications to topics such as language acquisition, computer systems, and perception and behavior.

----- **Information Science/Studies.** (Report under 11.0401)

30.99 **Multi/Interdisciplinary Studies, Other.** Instructional content is defined in code 30.9999.

30.9999 **Multi-/Interdisciplinary Studies, Other.** Any instructional program in multi/interdisciplinary studies not listed above.

31. PARKS, RECREATION, LEISURE, AND FITNESS STUDIES. Instructional programs that focus on the principles and practices of managing parks and other recreational and fitness facilities; providing recreational, leisure and fitness services; and the study of human fitness.

31.01 Parks, Recreation and Leisure Studies. Instructional content is defined in code 31.0101.

31.0101 Parks, Recreation and Leisure Studies. A program that focuses on the principles underlying recreational and leisure activities, and the practices involved in providing indoor and outdoor recreational facilities and services for the general public.

31.03 Parks, Recreation and Leisure Facilities Management. Instructional content is defined in code 31.0301.

31.0301 Parks, Recreation and Leisure Facilities Management. A program that prepares individuals to develop and manage park facilities and other indoor and outdoor recreation and leisure facilities. Includes instruction in supervising support personnel, health and safety standards, public relations, and basic business and marketing principles.

31.05 Health and Physical Education/Fitness. Instructional content for this group of programs is defined in codes 31.0501- 31.0599.

31.0501 Health and Physical Education, General. A general program that focuses on activities and principles that promote physical fitness, achieve and maintain athletic prowess, and accomplish related research and service goals. Includes instruction in human movement studies, motivation studies, rules and practice of specific sports, exercise and fitness principles and techniques, basic athletic injury prevention and treatment, and organizing and leading fitness and sports programs.

----- **Health Teacher Education.** (Report under 13.1307)

----- **Physical Education Teaching and Coaching.** (Report under 13.1314)

(31.0502) Adapted Physical Education/Therapeutic Recreation. (Moved, Report under 51.2309)

(31.0503) Athletic Training and Sports Medicine. (Moved, Report under 51.0913)

31.0504 Sport and Fitness Administration/Management. A program that prepares individuals to apply business, coaching and physical education principles to the organization, administration and management of athletic programs and teams, fitness/rehabilitation facilities and health clubs, sport recreation services, and related services. Includes instruction in program planning and development; business and financial management principles; sales, marketing and recruitment; event promotion, scheduling and management; facilities management; public relations; legal aspects of sports; and applicable health and safety standards.

31.0505 Kinesiology and Exercise Science. A scientific program that focuses on the anatomy, physiology, biochemistry, and biophysics of human movement, and applications to exercise and therapeutic rehabilitation.

Includes instruction in biomechanics, motor behavior, motor development and coordination, motor neurophysiology, performance research, rehabilitative therapies, the development of diagnostic and rehabilitative methods and equipment, and related analytical methods and procedures in applied exercise and therapeutic rehabilitation .

[31.0506] Socio-Psychological Sports Studies. (Deleted, Report under 31.0599)

31.0599 Health and Physical Education/Fitness, Other. Any instructional program in health and physical education/fitness not listed above.

31.99 Parks, Recreation, Leisure, and Fitness Studies, Other. Instructional content is defined in code 31.9999.

31.9999 Parks, Recreation, Leisure, and Fitness Studies, Other. Any instructional program in parks, recreation, leisure and fitness studies not listed above.

32- 37. Programs for Series 32-37 (Personal Improvement and Leisure programs) are located in chapter V. (245)

38. PHILOSOPHY AND RELIGIOUS STUDIES. Instructional programs that focus on logical inquiry, philosophical analysis, and the academic study of organized systems of belief and religious practices.

----- **THEOLOGY AND RELIGIOUS VOCATIONS.** (Report under 39. Series)

38.01 Philosophy. Instructional content for this group of programs is defined in codes 38.0101– 38.0199.

38.0101 Philosophy. A program that focuses on ideas and their logical structure, including arguments and investigations about abstract and real phenomena. Includes instruction in logic, ethics, aesthetics, epistemology, metaphysics, symbolism, and history of philosophy, and applications to the theoretical foundations and methods of other disciplines.

38.0102 Logic. (NEW) A program that focuses on the systematic study of valid inference, argument, and sound reasoning. Includes instruction in Classical logic, properties of argument, validity, proof, fallacies, formal and material logic, symbolic and mathematical logic, analysis, specific schools of logic, and applications to problems in other academic disciplines and professional fields.

----- **Mathematics.** (Report under 27.01 Series)

----- **Computer Science.** (Report under 11.01 Series)

38.0103 Ethics. (NEW) A program that focuses on the systematic study of the theory of moral good and its application to various theoretical and practical problems. Includes instruction in ethical theory, history of ethics, belief and value systems, ethical constructs, and applications to specific topics, issues and problems.

38.0199 **Philosophy, Other. (NEW)** Any instructional program in Philosophy not listed above.

38.02 Religion/Religious Studies. Instructional content for this group of programs is defined in codes 38.0201 - 38.0299.

38.0201 **Religion/Religious Studies.** A program that focuses on the nature of religious belief and specific religious and quasi-religious systems. Includes instruction in phenomenology; the sociology, psychology, philosophy, anthropology, literature and art of religion; mythology; scriptural and textual studies; religious history and politics; and specific studies of particular faith communities and their behavior.

38.0202 **Buddhist Studies. (NEW)** A program that focuses on the philosophy preached by Siddhartha Gautama, the Buddha, in ancient India and subsequently interpreted by his disciples and apostles; together with the intellectual, cultural, social, and ritual developments of the faith and its branches. Includes instruction in Buddhist sacred literature (Tipitaka, etc.) and study of one or more of the main branches including Early Buddhism, Hinayana, Theravada, Madhyamaka, Yogacara, Pure Land, Shingon, Tendai, Nichiren Shu, Zen, Tibetan, Chinese, Korean, Vietnamese, and others.

38.0203 **Christian Studies. (NEW)** A program that focuses on the philosophy and teachings of Jesus Christ and his apostles, and the subsequent intellectual and cultural movements and institutions based on Christianity. Includes instruction in Christian sacred scripture, Christian literature and philosophy, and studies of one or more of the main branches of the faith and their cultural context including Orthodoxy, Roman Catholicism, Protestantism, Evangelicalism, and others.

38.0204 **Hindu Studies. (NEW)** A program that focuses on the group of South Asian theologies and philosophies collectively known as Hinduism; together with the religious history and cultural and social manifestations of the faith. Includes instruction in Hindu theology and philosophy (dharma); literature (Vedas, Upanishads, Epics, and commentaries); the Hindu Pantheon, sects, and movements; schools and disciplines; and related arts and sciences.

38.0205 **Islamic Studies.** A program that focuses on Islam as preached by the Prophet Muhammad in 6th century Arabia and subsequently interpreted and elaborated by Islamic scholars and others; together with the cultural and social milieu related to the faith in various periods, localities, and branches. Includes instruction in Islamic scripture and related written authorities and commentaries (Qur'an, Hadith, Sunnah, Tafsir, Sirah); Islamic law and jurisprudence; Sufism; the various branches including Sunni, Shi'ia, Ahmaddiyah, and others; and the development of Islamic religion and society from the beginnings to the present.
(Moved from 05.0204)

38.0206 **Jewish/Judaic Studies.** A program that focuses on the history, culture, and religion of the Jewish people. Includes instruction in Jewish religious heritage, sacred texts, and law; Jewish philosophy and intellectual history; Jewish life and culture, both in Israel and the Jewish Diaspora; historical Jewish minority cultures such as the Yiddish,

Sephardic, and other; anti-Semitism, gentile relations and Shoa; Zionism; and modern developments within Judaism. (*Moved from 05.0205*).

----- **Holocaust and Related Studies.** (Report under 30.2101)

38.0299 **Religion/Religious Studies, Other. (NEW)** Any instructional program in religion/religious studies not listed above.

38.99 **Philosophy and Religious Studies, Other.** Instructional content is defined in code 38.9999.

38.9999 **Philosophy and Religious Studies, Other.** Any instructional program in philosophy and religion not listed above.

39. THEOLOGY AND RELIGIOUS VOCATIONS. Instructional programs that focus on the intramural study of theology and that prepare individuals for the professional practice of religious vocations.

----- **Religion/Religious Studies.** (Report under 38.02 Series)

[39.01] Biblical and Other Theological Languages and Literatures. (Deleted)

[39.0101] Biblical and Other Theological Languages and Literatures.
(Deleted, Report under 16.1103)

39.02 Bible/Biblical Studies. Instructional content is defined in code 39.0201.

39.0201 Bible/Biblical Studies. A program that focuses on the Christian and/or Jewish Bible and related literature, with an emphasis on understanding and interpreting the theological, doctrinal, and ethical messages contained therein. May include preparation for applying these studies in various religious vocations.

----- **Christian Studies.** (Report under 38.0203)

----- **Jewish/Judaic Studies.** (Report under 38.0206)

39.03 Missions/Missionary Studies and Missiology. Instructional content is defined in code 39.0301.

39.0301 Missions/Missionary Studies and Missiology. A program that focuses on the theory and practice of religious outreach, social service and proselytization, and that prepares individuals for mission vocations. Includes instruction in theology, evangelism, preaching, medical and social mission work, missionary education, missionary aviation, emergency services, legal and political aspects of working in other countries, and preparation for ordination as missionaries.

39.04 Religious Education. Instructional content is defined in code 39.0401.

39.0401 Religious Education. A program that focuses on the theory and practice of providing educational services to members of faith communities, within the context of a particular religion, and that prepares individuals to serve as religious educators. Includes instruction in planning and teaching lessons; organizing and supervising instructional activities; designing and developing instructional materials; and administering religious education programs and facilities.

39.05 Religious/Sacred Music. Instructional content is defined in code 39.0501.

----- **Music.** (Report under 50.09 Series)

39.0501 Religious/Sacred Music. A program that focuses on the history, theory, composition, and performance of music for religious or sacred purposes, and that prepares individuals for religious musical vocations such as choir directors, Cantors, organists, and chanters.

39.06 Theological and Ministerial Studies. Instructional content for this group of programs is defined in codes 39.0601- 39.0699.

39.0601 Theology/Theological Studies. A program that focuses on the beliefs and doctrine of a particular religious faith from the intramural point of view of that faith. Includes instruction in systematic theology, historical theology, moral theology, doctrinal studies, dogmatics, apologetics, and applications to specific questions of ecclesiastical polity and religious life.

39.0602 Divinity/Ministry (BD, MDiv.). A program that prepares individuals for ordination as ministers or priests in any of the Christian religious traditions. Includes instruction in the theology and polity of a particular church, church law, liturgy and ritual, principles of pastoral ministry, homiletics, evangelism, church/parish organization and management, Christian ethics, church history, and related studies.

[39.0603] Rabbinical Studies (M.H.L./Rav). (Deleted, Report under code 39.0605 or 39.0606).

39.0604 Pre-Theology/Pre-Ministerial Studies. A program that prepares individuals to enter a seminary or other program leading to religious ordination, or a related religious vocation.

39.0605 Rabbinical Studies (M.H.L./Rav). (NEW) A program that prepares individuals for ordination as Rabbis. Includes instruction in Talmud, Halacha, Liturgy and Rituals, Rabbinical Thought, Jewish Ethics, Jewish Education, Pastoral Counseling and Homiletics.

----- **Jewish/Judaic Studies.** (Report under 38.0206)

39.0606 Talmudic Studies. (NEW) A program that prepares individuals for advanced Talmudic scholarship and research and for entry into a program leading to ordination as Rabbis; students are also qualified to enter conventional graduate and professional schools. Includes instruction in Jewish Law and Jurisprudence, Philosophy, and Ethics, in addition to a major emphasis on Talmud.

----- **Buddhist Studies.** (Report under 38.0202)

----- **Hindu Studies.** (Report under 38.0204)

----- **Islamic Studies.** (Report under 38.0205)

39.0699 Theological and Ministerial Studies, Other. Any instructional program in theological and ministerial studies not listed above, including preparation for religious vocations in faiths other than Christianity and Judaism.

39.07 Pastoral Counseling and Specialized Ministries. Instructional content for this group of programs is defined in codes 39.0701- 39.0799.

39.0701 Pastoral Studies/Counseling. A program that focuses on the theory and principles of pastoral care and prepares ordained clergy to provide non-clinical pastoral counseling to individuals and groups. Includes instruction in pastoral leadership, counseling psychology; crisis intervention; individual and group procedures; theological and spiritual counseling; pastoral care; and applications to specific types of ministry.

----- **Clinical Pastoral Counseling/Patient Counseling.** (Report under 51.1506)

39.0702 Youth Ministry. (NEW) A program that prepares the ordained clergy and other religious professionals to provide spiritual, counseling, and leadership services to children, adolescents, and young adults. Includes instruction in child and adolescent psychology, human growth and development, family studies, communication skills, religious education, youth counseling, small group leadership, planning and organizing youth activities, volunteer supervision, and youth evangelism and worship.

39.0799 Pastoral Counseling and Specialized Ministries, Other. (NEW) Any instructional program in pastoral counseling and specialized ministries not listed above.

39.99 Theology and Religious Vocations, Other. Instructional content is defined in code 39.9999.

39.9999 Theology and Religious Vocations, Other. Any instructional program in theological studies and religious vocations not listed above.

40. PHYSICAL SCIENCES. Instructional programs that focus on the scientific study of inanimate objects, processes of matter and energy, and associated phenomena.

40.01 Physical Sciences. Instructional content is defined in code 40.0101.

40.0101 Physical Sciences. A program that focuses on the major topics, concepts, processes, and interrelationships of physical phenomena as studied in any combination of physical science disciplines.

40.02 Astronomy and Astrophysics. Instructional content for this group of programs is defined in codes 40.0201- 40.0299.

40.0201 Astronomy. A general program that focuses on the planetary, galactic, and stellar phenomena occurring in outer space. Includes instruction in celestial mechanics, cosmology, stellar physics, galactic evolution, quasars, stellar distribution and motion, interstellar medium, atomic and molecular constituents of astronomical phenomena, planetary science, solar system evolution, and specific methodologies such as optical astronomy, radioastronomy, and theoretical astronomy.

40.0202 Astrophysics. A program that focuses on the theoretical and observational study of the structure, properties, and behavior of stars, star systems and clusters, stellar life cycles, and related phenomena. Includes instruction in cosmology, plasma kinetics, stellar physics, convection and non-equilibrium radiation transfer theory, non-Euclidean geometries, mathematical modeling, galactic structure theory, and relativistic astronomy. (*Moved from 40.0301*)

40.0203 Planetary Astronomy and Science. (NEW) A program that focuses on the scientific study of planets, small objects, and related gravitational systems. Includes instruction in the structure and composition of planetary surfaces and interiors, planetary atmospheres, satellites, orbital mechanics, asteroids and comets, solar system evolution and dynamics, planetary evolution, gravitational physics, and radiation physics.

40.0299 Astronomy and Astrophysics, Other. (NEW) Any instructional program in astronomy and astrophysics not listed above.

[40.03] Astrophysics. (Deleted)

(40.0301) Astrophysics. (Moved, Report under 40.0202)

40.04 Atmospheric Sciences and Meteorology. Instructional content for this group of programs is defined in codes 40.0401- 40.0499.

40.0401 Atmospheric Sciences and Meteorology, General. A general program that focuses on the scientific study of the composition and behavior of the atmospheric envelopes surrounding the earth, the effect of earth's atmosphere on terrestrial weather, and related problems of environment and climate. Includes instruction in atmospheric chemistry and physics, atmospheric dynamics, climatology and climate change, weather simulation, weather forecasting, climate modeling and mathematical theory; and studies of specific phenomena such as clouds, weather systems, storms, and precipitation patterns.

40.0402 Atmospheric Chemistry and Climatology. (NEW) A program that focuses on the scientific study of atmospheric constituents, reactions, measurement techniques, and processes in predictive, current, and historical contexts. Includes instruction in climate modeling, gases and aerosols, trace gases, aqueous phase chemistry, sinks, transport mechanisms, computer measurement, climate variability, paleoclimatology, climate diagnosis, numerical modeling and data

analysis, ionization, recombination, photoemission, and plasma chemistry.

40.0403 ***Atmospheric Physics and Dynamics. (NEW)*** A program that focuses on the scientific study of the processes governing the interactions, movement, and behavioral of atmospheric phenomena and related terrestrial and solar phenomena. Includes instruction in cloud and precipitation physics, solar radiation transfer, active and passive remote sensing, atmospheric electricity and acoustics, atmospheric wave phenomena, turbulence and boundary layers, solar wind, geomagnetic storms, coupling, natural plasma, and energization.

40.0404 ***Meteorology. (NEW)*** A program that focuses on the scientific study of the prediction of atmospheric motion and climate change. Includes instruction in general circulation patterns, weather phenomena, atmospheric predictability, parameterization, numerical and statistical analysis, large- and mesoscale phenomena, kinematic structures, precipitation processes, and forecasting techniques.

40.0499 ***Atmospheric Sciences and Meteorology, Other. (NEW)*** Any instructional program in atmospheric sciences and meteorology not listed above.

40.05 **Chemistry.** Instructional content for this group of programs is defined in codes 40.0501-40.0599.

40.0501 **Chemistry, General.** A general program that focuses on the scientific study of the composition and behavior of matter, including its micro- and macro-structure, the processes of chemical change, and the theoretical description and laboratory simulation of these phenomena.

---- **Chemistry Teacher Education.** (Report under 13.1323)

---- **Chemical Engineering.** (Report under 14.0701)

40.0502 **Analytical Chemistry.** A program that focuses on the scientific study of techniques for analyzing and describing matter, including its precise composition and the interrelationships of constituent elements and compounds. Includes instruction in spectroscopy, chromatography, atomic absorption, photometry, chemical modeling, mathematical analysis, laboratory analysis procedures and equipment maintenance, and applications to specific research, industrial and health problems.

40.0503 **Inorganic Chemistry.** A program that focuses on the scientific study of the elements and their compounds, other than the hydrocarbons and their derivatives. Includes instruction in the characterization and synthesis of non-carbon molecules, including their structure and their bonding, conductivity, and reactive properties; research techniques such as spectroscopy, X-ray diffraction, and photoelectron analysis; and the study of specific compounds, such as transition metals, and compounds composed of inorganic and organic molecules.

40.0504 **Organic Chemistry.** A program that focuses on the scientific study of the properties and behavior of hydrocarbon compounds and their derivatives. Includes instruction in molecular conversion and synthesis, the molecular structure of living cells and systems, the mutual reactivity of organic and inorganic compounds in combination, the spectroscopic

analysis of hydrocarbon compounds, and applications to specific problems in research, industry, and health.

(40.0505) Medicinal/Pharmaceutical Chemistry. (Moved, Report under 51.2004)

40.0506 Physical and Theoretical Chemistry. A program that focuses on the scientific study of the theoretical properties of matter, and the relation of physical forces and phenomena to the chemical structure and behavior of molecules and other compounds. Includes instruction in reaction theory, calculation of potential molecular properties and behavior, computer simulation of structures and actions, transition theory, statistical mechanics, phase studies, quantum chemistry, and the study of surface properties.

40.0507 Polymer Chemistry. A program that focuses on the scientific study of synthesized macromolecule and their interactions with other substances. Includes instruction in molecular bonding theory, polymerization, properties and behavior of unstable compounds, the development of tailored polymers, transition phenomena, and applications to specific industrial problems and technologies.

Polymer/Plastics Engineering. (Report under 14.3201)

40.0508 Chemical Physics. (NEW) A program that focuses on the scientific study of structural phenomena combining the disciplines of physical chemistry and atomic/molecular physics. Includes instruction in heterogeneous structures, alignment and surface phenomena, quantum theory, mathematical physics, statistical and classical mechanics, chemical kinetics, liquid crystals and membranes, molecular synthesis and design, and laser physics.

40.0599 Chemistry, Other. Any instructional program in chemistry not listed above.

40.06 Geological and Earth Sciences/Geosciences. Instructional content for this group of programs is defined in codes 40.0601 - 40.0699.

40.0601 Geology/Earth Science, General. A program that focuses on the scientific study of the earth; the forces acting upon it; and the behavior of the solids, liquids and gases comprising it. Includes instruction in historical geology, geomorphology, and sedimentology, the chemistry of rocks and soils, stratigraphy, mineralogy, petrology, geostatistics, volcanology, glaciology, geophysical principles, and applications to research and industrial problems.

Geological/Geophysical Engineering. (Report under 14.3901)

40.0602 Geochemistry. A program that focuses on the scientific study of the chemical properties and behavior of the silicates and other substances forming, and formed by geomorphological processes of the earth and other planets. Includes instruction in chemical thermodynamics, equilibrium in silicate systems, atomic bonding, isotopic fractionation, geochemical modeling, specimen analysis, and studies of specific organic and inorganic substances.

40.0603 Geophysics and Seismology. A program that focuses on the scientific study of the physics of solids and its application to the study of the earth

and other planets. Includes instruction in gravimetric, seismology, earthquake forecasting, magnetometry, electrical properties of solid bodies, plate tectonics, active deformation, thermodynamics, remote sensing, geodesy, and laboratory simulations of geological processes.

- 40.0604** **Paleontology.** A program that focuses on the scientific study of extinct life forms and associated fossil remains, and the reconstruction and analysis of ancient life forms, ecosystems, and geologic processes. Includes instruction in sedimentation and fossilization processes, fossil chemistry, evolutionary biology, paleoecology, paleoclimatology, trace fossils, micropaleontology, invertebrate paleontology, vertebrate paleontology, paleobotany, field research methods, and laboratory research and conservation methods.
- 40.0605** **Hydrology and Water Resources Science. (NEW)** A program that focuses on the scientific study of the occurrence, circulation, distribution, chemical and physical properties, and environmental interaction of surface and subsurface waters, including groundwater. Includes instruction in geophysics, thermodynamics, fluid mechanics, chemical physics, geomorphology, mathematical modeling, hydrologic analysis, continental water processes, global water balance, and environmental science.
- 40.0606** **Geochemistry and Petrology. (NEW)** A program that focuses on the scientific study of the igneous, metamorphic, and hydrothermal processes within the earth and the mineral, fluid, rock, and ore deposits resulting from them. Includes instruction in mineralogy, crystallography, petrology, volcanology, economic geology, meteoritics, geochemical reactions, deposition, compound transformation, core studies, theoretical geochemistry, computer applications, and laboratory studies.
- 40.0607** **Oceanography, Chemical and Physical.** A program that focuses on the scientific study of the chemical components, mechanisms, structure, and movement of ocean waters and their interaction with terrestrial and atmospheric phenomena. Includes instruction in material inputs and outputs, chemical and biochemical transformations in marine systems, equilibria studies, inorganic and organic ocean chemistry, oceanographic processes, sediment transport, zone processes, circulation, mixing, tidal movements, wave properties, and seawater properties.
(Moved from 40.0702)
- **Marine Biology and Biological Oceanography.** (Report under 26.1302)
- 40.0699** **Geological and Earth Sciences/Geosciences, Other.** Any instructional program in geological and related sciences not listed above.

[40.07] Miscellaneous Physical Sciences. (Deleted)

- [40.0701]** **Metallurgy.** (Deleted, Report under 40.9999)
- (40.0702)** **Oceanography, Chemical and Physical.** (Moved, Report under 40.0607)
- [40.0703]** **Earth and Planetary Sciences.** (Deleted, Report under 40.0601)

[40.0799] Miscellaneous Physical Sciences, Other. (Deleted, Report under 40.9999)

40.08 Physics. Instructional content for this group of programs is defined in codes 40.0801-40.0899.

40.0801 Physics, General. A general program that focuses on the scientific study of matter and energy, and the formulation and testing of the laws governing the behavior of the matter-energy continuum. Includes instruction in classical and modern physics, electricity and magnetism, thermodynamics, mechanics, wave properties, nuclear processes, relativity and quantum theory, quantitative methods, and laboratory methods.

----- **Physics Teacher Education.** (Report under 13.1329)

----- **Engineering Physics.** (Report under 14.1201)

----- **Biophysics.** (Report under 26.0203)

----- **Molecular Biophysics.** (Report under 26.0206)

40.0802 Atomic/Molecular Physics. A program that focuses on the scientific study of the behavior of matter-energy phenomena at the level of atoms and molecules. Includes instruction in chemical physics, atomic forces and structure, fission reactions, molecular orbital theory, magnetic resonance, molecular bonding, phase equilibria, quantum theory of solids, and applications to the study of specific elements and higher compounds.

40.0804 Elementary Particle Physics. A program that focuses on the scientific study of the basic constituents of sub-atomic matter and energy, and the forces governing fundamental processes. Includes instruction in quantum theory, field theory, single-particle systems, perturbation and scattering theory, matter-radiation interaction, symmetry, quarks, capture, Schrodinger mechanics, methods for detecting particle emission and absorption, and research equipment operation and maintenance.

40.0805 Plasma and High-Temperature Physics. A program that focuses on the scientific study of properties and behavior of matter at high temperatures, such that molecular and atomic structures are in a disassociated ionic or electronic state. Includes instruction in magnetohydrodynamics, free electron phenomena, fusion theory, electromagnetic fields and dynamics, plasma and non-linear wave theory, instability theory, plasma shock phenomena, quantitative modeling, and research equipment operation and maintenance.

40.0806 Nuclear Physics. A program that focuses on the scientific study of the properties and behavior of atomic nuclei instruction in nuclear reaction theory, quantum mechanics, energy conservation, nuclear fission and fusion, strong and weak atomic forces, nuclear modeling, nuclear decay, nucleon scattering, pairing, photon and electron reactions, statistical methods, and research equipment operation and maintenance.

----- **Nuclear Engineering.** (Report under 14.2301)

40.0807 Optics/Optical Sciences. A program that focuses on the scientific study of light energy, including its structure, properties and behavior under different conditions. Includes instruction in wave theory, wave mechanics, electromagnetic theory, physical optics, geometric optics, quantum theory of light, photon detecting, laser theory, wall and beam properties, chaotic light, non-linear optics, harmonic generation, optical systems theory, and applications to engineering problems.

Vision Sciences and Physiological Optics. (Report under 26.0909)

40.0808 Solid State and Low-Temperature Physics. A program that focuses on the scientific study of solids and related states of matter at low energy levels, including liquids and dense gases. Includes instruction in statistical mechanics, quantum theory of solids, many-body theory, low temperature phenomena, electron theory of metals, band theory, crystalline structures, magnetism and superconductivity, equilibria and dynamics of liquids, film and surface phenomena, quantitative modeling, and research equipment operation and maintenance.

40.0809 Acoustics. A program that focuses on the scientific study of sound, and the properties and behavior of acoustic wave phenomena under different conditions. Includes instruction in wave theory, the acoustic wave equation, energy transformation, vibration phenomena, sound reflection and transmission, scattering and surface wave phenomena, singularity expansion theory, ducting, and applications to specific research problems such as underwater acoustics, crystallography, and health diagnostics.

40.0810 Theoretical and Mathematical Physics. A program that focuses on the scientific and mathematical formulation and evaluation of the physical laws governing, and models describing, matter-energy phenomena, and the analysis of related experimental designs and results. Includes instruction in classical and quantum theory, relativity theory, field theory, mathematics of infinite series, vector and coordinate analysis, wave and particle theory, advanced applied calculus and geometry, analyses of continuum, cosmology, and statistical theory and analysis.

Mathematics. (Report under 27. Series)

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

40.99 Physical Sciences, Other. Instructional content is defined in code 40.9999.

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

41. SCIENCE TECHNOLOGIES/TECHNICIANS. Instructional programs that prepare individuals to apply scientific principles and technical skills in support of scientific research and development.

41.01 Biology Technician/Biotechnology Laboratory Technician. Instructional content is defined in code 41.0101.

41.0101 Biology Technician/Biotechnology Laboratory Technician. A program that prepares individuals to apply scientific principles and technical skills in support of biologists and biotechnologists in research,

industrial, and government settings. Includes instruction in fermentation technology, cell culturing, protein purification, biologic synthesis, assaying and testing, quality control, industrial microbiology, bioprocessing, chromatography and bioseparation, genetic technology, laboratory and hazardous materials safety, and computer applications.

----- **Health and Medical Laboratory Technologies/Technicians.** (Report under 51.10 Series)

41.02 Nuclear and Industrial Radiologic Technologies/Technicians. Instructional content for this group of programs is defined in codes 41.0204 – 41.0299.

41.0204 Industrial Radiologic Technology/Technician. A program that prepares individuals to apply scientific principles and technical skills to the operation of industrial and research testing equipment using radioisotopes. Includes instruction in x-ray analysis of materials, nondestructive testing and inspection of materials, and continuous measurement of paper or metal thickness.

41.0205 Nuclear/Nuclear Power Technology/Technician. A program that prepares individuals to apply scientific principles and technical skills in support of research scientists and operating engineers engaged in the running of nuclear reactors, and in nuclear materials processing and disposal. Includes instruction in basic nuclear physics and nuclear engineering, monitoring and safety procedures, radioactive materials handling and disposal, equipment maintenance and operation, and record keeping.

41.0299 Nuclear and Industrial Radiologic Technologies/Technicians, Other. Any instructional program in nuclear and industrial radiologic technologies not listed above.

41.03 Physical Science Technologies/Technicians. Instructional content for this group of programs is defined in codes 41.0301 – 41.0399.

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

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

41.99 Science Technologies/Technicians, Other. Instructional content is defined in code 41.9999.

41.9999 Science Technologies/Technicians, Other. Any instructional program in science technologies not listed above.

42. PSYCHOLOGY. Instructional programs that focus on the scientific study of the behavior of individuals, independently or collectively, and the physical and environmental bases of mental, emotional, and neurological activity.

42.01 Psychology, General. Instructional content is defined in code 42.0101.

42.0101 Psychology, General. A general program that focuses on the scientific study of individual and collective behavior, the physical and environmental bases of behavior, and the analysis and treatment of behavior problems and disorders. Includes instruction in the principles of the various subfields of psychology, research methods, and psychological assessment and testing methods.

----- **Psychology Teacher Education.** (Report under 13.1335)

42.02 Clinical Psychology. Instructional content is defined in code 42.0201.

42.0201 Clinical Psychology. A program that prepares individuals for the independent professional practice of clinical psychology, involving the analysis, diagnosis, and clinical treatment of psychological disorders and behavioral pathologies. Includes instruction in clinical assessment and diagnosis, personality appraisal, psychopathology, clinical psychopharmacology, behavior modification, therapeutic intervention skills, patient interviewing, personalized and group therapy, child and adolescent therapy, cognitive and behavioral therapy, supervised clinical practice, ethical standards, and applicable regulations.

42.03 Cognitive Psychology and Psycholinguistics. Instructional content is defined in code 42.0301.

42.0301 Cognitive Psychology and Psycholinguistics. A program that focuses on the scientific study of the mechanisms and processes of learning and thinking, and associated information encoding, decoding, processing and transmitting systems. Includes instruction in theories of cognition and intelligence; studies of cognitive processes such as memory, sensation, perception, pattern recognition, problem solving, and conceptual thinking; cybernetics; psycholinguistics; and the study of biological and social communications mechanisms and processes.

----- **Linguistics.** (Report under 16.0102)

----- **Cognitive Science.** (Report under 30.2501)

42.04 Community Psychology. Instructional content is defined in code 42.0401.

42.0401 Community Psychology. A program that prepares individuals to apply psychological principles to the analysis of social problems, and the implementation of intervention strategies for addressing these problems. Includes instruction in social ecology, primary and secondary prevention of social pathologies, social intervention strategies and tactics, large group counseling, social services systems behavior, creating settings, cultural stress, and the dynamics of social change.

----- **Community Organization and Advocacy.** (Report under 44.0201)

----- **Community Health Services/Liaison/Counseling.** (Report under 51.1504)

42.05 Comparative Psychology. (NEW) Instructional content is defined in code 42.0501.

42.0501 Comparative Psychology. (NEW) A program that focuses on the behavior of members of particular species or groups and the relationship of the behaviors of the species or group to their evolutionary origins. Includes instruction in differential psychology, experimental and physiological psychology, psychopharmacology, psychology of individual differences, reinforcement theory, and neurophysiology.

42.06 Counseling Psychology. Instructional content is defined in code 42.0601.

42.0601 Counseling Psychology. A program that prepares individuals for the independent professional practice of psychological counseling, involving the rendering of therapeutic services to individuals and groups experiencing psychological problems and exhibiting distress symptoms. Includes instruction in counseling theory, therapeutic intervention strategies, patient/counselor relationships, testing and assessment methods and procedures, group therapy, marital and family therapy, child and adolescent therapy, supervised counseling practice, ethical standards, and applicable regulations.

----- **Counselor Education/School Counseling and Guidance Services.** (Report under 13.1101)

----- **College Student Counseling and Personnel Services.** (Report under 13.1102)

----- **Marriage and Family Therapy/Counseling.** (Report under 51.1505)

----- **Pastoral Counseling and Specialized Ministries.** (Report under 39.07 Series)

42.07 Developmental and Child Psychology. Instructional content is defined in code 42.0701.

42.0701 Developmental and Child Psychology. A program that focuses on the scientific study of the psychological growth and development of individuals from infancy through adulthood. Includes instruction in cognitive and perceptual development, emotional development, personality development, the effects of biological maturation on behavior, theories of cognitive growth and related research methods, testing and assessment methods for different age levels, research on child and adolescent behavior therapy, and the psychology of aging.

Note ➤ Family and Human Development Studies/Individual and Family Development Studies, General, have been integrated into Developmental and Child Psychology because the definitions are virtually the same for the two programs.

----- **Clinical Child Psychology.** (Report under 42.2001)

42.08 Experimental Psychology. Instructional content is defined in code 42.0801.

42.0801 Experimental Psychology. A program that focuses on the scientific study of behavior under experimental conditions and the analysis of controlled behavioral responses. Includes instruction in learning theory, research design and experimental methods, psychological measurement, statistical design and methods, analysis of cognitive and behavioral variables, and the conduct of specialized and large-scale studies.

42.09 Industrial and Organizational Psychology. Instructional content is defined in code 42.0901.

42.0901 Industrial and Organizational Psychology. A program that focuses on the scientific study of individual and group behavior in institutional settings, applications to related problems of organization and industry, and that may prepare individuals to apply such principles in industrial and organizational settings. Includes instruction in group behavior theory, organizational theory, reward/punishment structures, human-machine and human-computer interactions, motivation dynamics, human stress studies, environmental and organizational influences on behavior, alienation and satisfaction, and job testing and assessment.

----- **Human Resources Management/Personnel Administration.** (Report under 52.1001)

----- **Organizational Behavior Studies.** (Report under 52.1003)

42.10 Personality Psychology. (NEW) Instructional content is defined in code 42.1001.

42.1001 Personality Psychology. (NEW) A program that focuses on the unique organization of fairly permanent characteristics that set the individual apart from other individuals and, at the same time, determine how others respond to that individual. Includes instruction in Freudian, Skinnerian, Rogerian, and Ellisonian psychology; neo-Freudian psychology; psychological systems, neurophysiology, and psychopharmacology.

42.11 Physiological Psychology/Psychobiology. Instructional content is defined in code 42.1101.

42.1101 Physiological Psychology/Psychobiology. A program that focuses on the scientific course study of the biological bases of psychological functioning, and their application to experimental and therapeutic research problems. Includes instruction in functional neuroanatomy, neural system development, biochemical neural regulatory mechanisms, neurological biophysics, memory storage and retrieval, physiology of cognition and perception, physiological bases of psychopathology and behavioral disorders, psychopharmacology, comparative psychobiology, and specialized experimental design and research methods.

----- **Biopsychology.** (Report under 30.1001)

----- **Neuroscience.** (Report under 30.2401)

----- **Physiology.** (Report under 26.09 Series)

42.16 Social Psychology. Instructional content is defined in code 42.1601.

42.1601 Social Psychology. A program that focuses on the scientific study of individual behavior in group contexts, group behavior, and associated phenomena. Includes instruction in social learning theory, group theory and dynamics, sex roles, social cognition and inference, attribution theory, attitude formation, criminal behavior and other social pathologies, altruistic behavior, social development, and social ecology.

Sociology. (Report under 45.1101)

42.17 School Psychology. Instructional content is defined in code 42.1701.

42.1701 School Psychology. A program that prepares individuals to apply clinical and counseling psychology principles to the diagnosis and treatment of student behavioral problems. Includes instruction in child and/or adolescent development; learning theory; testing, observation and other procedures for assessing educational, personality, intelligence and motor skill development; therapeutic intervention strategies for students and families; identification and classification of disabilities and disorders affecting learning; school psychological services planning; supervised counseling practice; ethical standards; and applicable regulations.

42.18 Educational Psychology. Instructional content is defined in code 42.1801. (*Moved from 13.08 Series*).

42.1801 Educational Psychology. A program that focuses on the application of psychology to the study of the behavior of individuals in the roles of teacher and learner, the nature and effects of learning environments, and the psychological effects of methods, resources, organization and non-school experience on the educational process. Includes instruction in learning theory, human growth and development, research methods, and psychological evaluation. (*Moved from 13.0802*)

42.19 Psychometrics and Quantitative Psychology. (NEW) Instructional content is defined in code 42.1901.

42.1901 Psychometrics and Quantitative Psychology. (NEW) A program that focuses on the mathematical and statistical procedures used in psychological test construction and validation; the general problems of the measurement of behavior; and the application of quantitative methods to research design and other methodological topics.

42.20 Clinical Child Psychology. (NEW) Instructional content is defined in code 42.2001.

42.2001 Clinical Child Psychology. (NEW) A program that focuses on the developmental processes of children and associated disorders and that prepares individuals for the independent professional practice of clinical child psychology. Includes instruction in developmental neuropsychology, child psychopathology, testing of children and adolescents, pediatric psychology, psychosocial variables in child development, clinical skills, family therapy, behavioral assessment and intervention, clinical skills, consultation, professional standards and

ethics, and applications to topics such as infancy, childhood, and adolescence.

----- **Developmental and Child Psychology.** (Report under 42.0701)

42.21 Environmental Psychology. (NEW) Instructional content is defined in code 42.2101.

42.2101 Environmental Psychology. (NEW) A program that focuses on the study of behavioral interactions between human beings and the environment in individual and group contexts, and ways to improve them. Includes instruction in contextual theory; statistics; physiological, social, and psychological responses to natural and technological hazards and disease; environmental perception and cognition; loneliness and stress; and psychological aspects of environmental design and planning.

42.22 Geropsychology. (NEW) Instructional content is defined in code 42.2201.

42.2201 Geropsychology. (NEW) A program that focuses on the psychology of aging and of elderly individuals and populations, with reference to growth and decline across the life span. Includes instruction in gerontology, developmental and adult psychology, age-related development and decline of cognitive processes, age-related psychological and neurological disorders, social and personality development in aging populations and individuals, and applications to the clinical treatment and care of older adults.

----- **Gerontology.** (Report under 30.1101)

----- **Adult Development and Aging** (Report under 19.0702)

42.23 Health Psychology. (NEW) Instructional content is defined in code 42.2301.

42.2301 Health/Medical Psychology. (NEW) A program that focuses on the psychological study of health and illness, and recovery, from the perspective that these phenomena arise from a combination of physical, behavioral, and social conditions. Includes instruction in abnormal and social psychology, psychophysiology, psychopharmacology, learning processes, clinical and behavioral therapies, biopsychosocial modeling, clinical procedures and assessment, preventive education, psychotherapy, rehabilitation processes, and research methods.

42.24 Psychopharmacology. (NEW) Instructional content is defined in code 42.2401.

42.2401 Psychopharmacology. (NEW) A program that focuses on the study of the behavioral effects of medications, drugs, nutrients, and chemicals (including natural and artificial toxins) in laboratory and clinical settings. Includes instruction in pharmacology, behavioral toxicology and pharmacology, neuroscience, physiology, clinical psychopharmacology, substance abuse treatments and antidotes, neurochemical mechanisms, epidemiology of chemicals and substances, biochemical interactions, and psychoactive drugs.

42.25 Family Psychology. (NEW) Instructional content is defined in code 42.2501.

42.2501 **Family Psychology. (NEW)** A program that prepares individuals to provide therapeutic, evaluative, and research services to families and individuals in the family unit context. Includes instruction in natural and family systems theory, family and group rituals, family evaluation and assessment, marital and couples therapy, sex therapy, parenting, interviewing techniques, genogram construction, family sculpting, diversity issues, family violence, family law, and professional standards and ethics.

----- **Marriage and Family Therapy/Counseling.** (Report under 51.1505)

42.26 **Forensic Psychology. (NEW)** Instructional content is defined in code 42.2601.

42.2601 **Forensic Psychology. (NEW)** A program that prepares individuals to apply clinical, counseling, school, and neuropsychology skills to the provision of psychological services within the criminal justice and civil legal systems, including consultation, assessment, and interventions. Includes instruction in the epidemiology of mental/behavioral disorders, risk factors for violence and criminality, profiling and patterning, psychological testing, prediction and intervention measurement, forensic assessment, criminal and civil law and procedures, secure environments, forensic treatment and intervention skills, and professional standards and ethics.

42.99 **Psychology, Other.** Instructional content is defined in code 42.9999.

42.9999 **Psychology, Other.** Any instructional program in psychology not listed above.

43. **SECURITY AND PROTECTIVE SERVICES.** Instructional programs that focus on the principles and procedures for providing police, fire, and other safety services and managing penal institutions.

43.01 **Criminal Justice and Corrections.** Instructional content for this group of programs is defined in codes 43.0102 – 43.0199.

----- **Criminology.** (Report under 45.04 Series)

43.0102 **Corrections.** A program that prepares individuals to study the theories and principles, of correctional science and to function as professional corrections officers and other workers in public and/or private incarceration facilities.

43.0103 **Criminal Justice/Law Enforcement Administration.** A program that prepares individuals to apply theories and practices of criminal justice to structuring, managing, directing and controlling criminal justice agencies, including police departments, sheriff's departments, law enforcement divisions and units, and private protective services.

43.0104 **Criminal Justice/Safety Studies.** A program that focuses on the criminal justice system, its organizational components and processes, and its legal and public policy contexts. Includes instruction in criminal law and policy, police and correctional systems organization, the

administration of justice and the judiciary, and public attitudes regarding criminal justice issues.

- 43.0106 Forensic Science and Technology.** A program that focuses on the application of the physical, biomedical, and social sciences to the analysis and evaluation of physical evidence, human testimony and criminal suspects. Includes instruction in forensic medicine, forensic dentistry, anthropology, psychology, pathology, forensic laboratory technology, crime scene analysis, fingerprint technology, document analysis, pattern analysis, examination procedures, applicable law and regulations, and professional standards and ethics.
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- 43.0107 Criminal Justice/Police Science.** A program that prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operation and maintenance, report preparation and other routine law enforcement responsibilities.
- 43.0109 Security and Loss Prevention Services.** A program that prepares individuals to perform routine inspection, patrol and crime prevention services for private clients. Includes instruction in the provision of personal protection as well as property security.
- 43.0110 Juvenile Corrections. (NEW)** A program that prepares individuals to specialize in the provision of correction services to underage minor populations. Includes instruction in corrections, juvenile delinquency, juvenile development and psychology, juvenile law, and justice administration, social services, record-keeping procedures, and communication skills.
- 43.0111 Criminalistics and Criminal Science. (NEW)** A program that focuses on the application of clinical and criminal laboratory science, investigative techniques, and criminology to the reconstruction of crimes and the analysis of physical evidence. Includes instruction in laboratory science, laboratory procedures, criminology and police science, evidentiary testing and analysis, computer applications, record-keeping, reconstruction techniques, evidence handling and storage, and applications to specific types of evidence and crimes.
- 43.0112 Securities Services Administration/Management. (NEW)** A program that prepares individuals to plan, manage, and supervise services providing private security protection for people and property and related investigative and consulting functions. Includes instruction in security and loss prevention services, private security and investigation techniques, security technologies, personnel management, business operations, marketing, applicable law and regulations, and client relations.
- 43.0113 Corrections Administration. (NEW)** A program that prepares individuals to plan and manage institutional facilities and programs for housing and rehabilitating prisoners in the public and/or private sectors. Includes instruction in the principles and practice of correction, facilities planning and management, safety and security, social and health services, staff and inmate management, budgeting, communication

skills, correctional psychology, and applications to specific types of correctional facilities approaches.

43.0199 **Corrections and Criminal Justice, Other.** Any instructional program in corrections and criminal justice not listed above.

43.02 **Fire Protection.** Instructional content for this group of programs is defined in codes 43.0201 – 43.0299.

43.0201 **Fire Protection and Safety Technology/Technician.** A program that prepares individuals to apply a knowledge of fire prevention and control skills to problems of reducing fire risk, loss limitation, supervising substance removal, conducting fire investigations, and advising on matters of safety procedures and fire prevention policy.

43.0202 **Fire Services Administration.** A program that prepares individuals to structure, manage, direct and control fire departments, fire prevention services, fire inspection and investigation offices and ancillary rescue services.

43.0203 **Fire Science/Fire-fighting.** A program that prepares individuals to perform the duties of fire fighters. Includes instruction in fire-fighting equipment operation and maintenance, principles of fire science and combustible substances, methods of controlling different types of fires, hazardous material handling and control, fire rescue procedures, public relations and applicable laws and regulations.

----- **Emergency Medical Technology/Technician (Paramedic).** (Report under 51.0904)

43.0299 **Fire Protection, Other.** Any instructional program in fire protection not listed above.

43.99 **Security and Protective Services, Other.** Instructional content is defined in code 43.9999.

43.9999 **Security and Protective Services, Other.** Any instructional program in protective services not listed above.

44. PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS. Instructional programs that prepare individuals to analyze, manage, and deliver public programs and services.

44.00 Human Services, General. (NEW) Instructional content is defined in code 44.0000.

44.0000 Human Services, General. (NEW) A program that focuses on the general study and provision of human and social services to individuals and communities and prepares individuals to work in public and private human services agencies and organizations. Includes instruction in the social sciences, psychology, principles of social service, human services policy, planning and evaluation, social services law and administration, and applications to particular issues, services, localities, and populations.

44.02 Community Organization and Advocacy. Instructional content is defined in code 44.0201.

44.0201 Community Organization and Advocacy. A program that focuses on the theories, principles, and practice of providing services to communities, organizing communities and neighborhoods for social action, serving as community liaisons to public agencies, and using community resources to furnish information, instruction, and assistance to all members of a community. May prepare individuals to apply such knowledge and skills in community service positions.

----- **Community Psychology.** (Report under 42.0401)

----- **Community Health Services (Mental and Social Health Services Counseling).** (Report under 51.15 Series)

44.04 Public Administration. Instructional content is defined in code 44.0401.

44.0401 Public Administration. A program that prepares individuals to serve as managers in the executive arm of local, state, and federal government; and that focuses on the systematic study of executive organization and management. Includes instruction in the roles, development, and principles of public administration; the management of public policy; executive-legislative relations; public budgetary processes and financial management; administrative law; public personnel management; professional ethics; and research methods.

44.05 Public Policy Analysis. Instructional content is defined in code 44.0501.

44.0501 Public Policy Analysis. A program that focuses on the systematic analysis of public policy issues and decision processes. Includes instruction in the role of economic and political factors in public decision-making and policy formulation; microeconomic analysis of policy issues; resource allocation and decision modeling; cost/benefit analysis; statistical methods; and applications to specific public policy topics.

----- **Natural Resources Management and Policy.** (Report under 03.0201)

----- **Science, Technology and Society.** (Report under 30.1501)

44.07 Social Work. Instructional content for this group of programs is defined in codes 44.0701 – 44.0799.

44.0701 Social Work. A program that prepares individuals for the professional practice of social welfare administration and counseling, and that focus on the study of organized means of providing basic support services for vulnerable individuals and groups. Includes instruction in social welfare policy; case work planning; social counseling and intervention strategies; administrative procedures and regulations; and specific applications in areas such as child welfare and family services, probation, employment services, and disability counseling.

----- **Clinical/Medical Social Work.** (Report under 51.1503)

44.0702 Youth Services/Administration. (NEW) A program that prepares individuals to plan, manage, and implement social services for children, youth, and families. Includes instruction in child development and psychology, adolescence, family studies, social work, social services administration, juvenile and family law, program and facilities planning, youth leadership, counseling, probation, casework, applicable procedures, and regulations, and professional standards and ethics.

44.0799 Social Work, Other. (NEW) Any program providing instruction in social work and related services not listed above.

44.99 Public Administration and Social Service Professions, Other. Instructional content is defined in code 44.9999.

44.9999 Public Administration and Social Service Professions, Other. Any instructional program in public administration and services not listed above.

45. SOCIAL SCIENCES. Instructional programs that focus on the systematic study of social systems, social institutions, and social behavior. **Note** ➡ History programs have been moved from this Series and placed in a newly-established Series (Series 54.).

45.01 Social Sciences, General. Instructional content is defined in code 45.0101.

45.0101 Social Sciences, General. A program that focuses on the general study of human social behavior and social institutions using any of the methodologies common to the social sciences and/or history, or an undifferentiated program of study in the social sciences.

----- **Social Science Teacher Education.** (Report under 13.1317)

----- **Social Studies Teacher Education.** (Report under 13.1318)

----- **Liberal Arts and Sciences/Liberal Studies.** (Report under 24.0101)

45.02 Anthropology. Instructional content for this group of programs is defined in codes 45.0201- 45.0299.

45.0201 Anthropology. A program that focuses on the systematic study of human beings, their antecedents and related primates, and their cultural behavior and institutions, in comparative perspective. Includes

instruction in biological/physical anthropology, primatology, human paleontology and prehistoric archeology, hominid evolution, anthropological linguistics, ethnography, ethnology, ethnohistory, socio-cultural anthropology, psychological anthropology, research methods, and applications to areas such as medicine, forensic pathology, museum studies, and international affairs.

----- **AREA, ETHNIC AND CULTURAL STUDIES.** (Report under 05. Series)

----- **Linguistics.** (Report under 16.0102)

----- **Museology/Museum Studies.** (Report under 30.1401)

45.0202 **Physical Anthropology. (NEW)** A program that focuses on the application of the biological sciences and anthropology to the study of the adaptations, variability, and the evolution of human beings and their living and fossil relatives. Includes instructions in anthropology, human and mammalian anatomy, cell biology, paleontology, human culture and behavior, neuroscience, forensic anthropology, anatomical reconstruction, comparative anatomy, and laboratory science and methods.

45.0299 **Anthropology, Other. (NEW)** Any instructional program in Anthropology not listed above.

45.03 Archeology. Instructional content is defined in code 45.0301.

45.0301 **Archeology.** A program that focuses on the systematic study of extinct societies, and the past of living societies, via the excavation, analysis and interpretation of their artifactual, human, and associated remains. Includes instruction in archeological theory, field methods, dating methods, conservation and museum studies, cultural and physical evolution, and the study of specific selected past cultures.

----- **Medieval and Renaissance Studies.** (Report under 13.1301)

----- **Museology/Museum Studies.** (Report under 30.1401)

----- **Ancient Studies/Civilization.** (Report under 30.2201)

----- **Classical, Ancient Mediterranean and Near Eastern Studies and Archaeology.** (Report under 30.2202)

----- **Cultural Resource Management and Policy Analysis.** (Report under 30.1202)

----- **Art History, Criticism and Conservation.** (Report under 50.0703)

45.04 Criminology. Instructional content is defined in code 45.0401.

45.0401 **Criminology.** A program that focuses on the systematic study of crime as a sociopathological phenomenon, the behavior of criminals, and the social institutions evolved to respond to crime. Includes instruction in the theory of crime, psychological and social bases of criminal behavior, social value systems and the theory of punishment, criminal law and criminal justice systems, penology, rehabilitation and recidivism, studies

of specific types of crime, social attitudes and policy, and applications to specific issues in law enforcement administration and policy.

----- **Corrections and Criminal Justice.** (Report under 43.01 Series)

----- **Sociology.** (Report under 45.1101)

45.05 Demography and Population Studies. Instructional content is defined in code 45.0501.

45.0501 Demography and Population Studies. A program that focuses on the systematic study of population models and population phenomena, and related problems of social structure and behavior. Includes instruction in population growth, spatial distribution, mortality and fertility factors, migration, dynamic population modeling, population estimation and projection, mathematical and statistical analysis of population data, population policy studies, and applications to problems in economics and government planning.

----- **Mathematical Statistics and Probability.** (Report under 27.0502)

----- **Sociology.** (Report under 45.1101)

45.06 Economics. Instructional content for this group of programs is defined in codes 45.0601- 45.0699.

45.0601 Economics, General. A general program that focuses on the systematic study of the production, conservation and allocation of resources in conditions of scarcity, together with the organizational frameworks related to these processes. Includes instruction in economic theory, micro- and macroeconomics, comparative economic systems, money and banking systems, international economics, quantitative analytical methods, and applications to specific industries and public policy issues.

----- **Agricultural Economics.** (Report under 01.0103)

----- **Business/Managerial Economics.** (Report under 52.0601)

----- **Consumer Economics.** (Report under 19.0402)

45.0602 Applied Economics. A program that focuses on the application of economic principles and analytical techniques to the study of particular industries, activities, or the exploitation of particular resources. Includes instruction in economic theory; microeconomic analysis and modeling of specific industries, commodities; the economic consequences of resource allocation decisions; regulatory and consumer factors; and the technical aspects of specific subjects as they relate to economic analysis.

----- **Agricultural Economics.** (Report under 01.0103)

----- **Natural Resource Economics.** (Report under 03.0204)

- 45.0603 Econometrics and Quantitative Economics.** A program that focuses on the systematic study of mathematical and statistical analysis of economic phenomena and problems. Includes instruction in economic statistics, optimization theory, cost/benefit analysis, price theory, economic modeling, and economic forecasting and evaluation.
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- Applied Mathematics.** (Report under 27.0301)
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- Operations Research.** (Report under 14.3701)
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- Mathematical Statistics and Probability.** (Report under 27.0502)
- 45.0604 Development Economics and International Development.** A program that focuses on the systematic study of the economic development process and its application to the problems of specific countries and regions. Includes instruction in economic development theory, industrialization, land reform, infrastructural development, investment policy, the role of governments and business in development, international development organizations, and the study of social, health, and environmental influences on economic development.
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- International Agriculture.** (Report under 01.0701)
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- International Relations and Affairs.** (Report under 45.0901)
- 45.0605 International Economics.** A program that focuses on the systematic study and analysis of international commercial behavior and trade policy. Includes instruction in international trade theory, tariffs and quotas, commercial policy, trade factor flows, international finance and investment, currency regulation and trade exchange rates and markets, international trade negotiation, and international payments and accounting policy.
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- International Finance.** (Report under 52.0806)
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- International Business/Trade/Commerce.** (Report under 52.1101)
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- International Marketing.** (Report under 52.1403)
- 45.0699 Economics, Other.** Any instructional program in economics not listed above.
- 45.07 Geography and Cartography.** Instructional content for this group of programs is defined in codes 45.0701-45.0799.
- 45.0701 Geography.** A program that focuses on the systematic study of the spatial distribution and interrelationships of people, natural resources, plant and animal life. Includes instruction in historical and political geography, cultural geography, economic and physical geography, regional science, cartographic methods, remote sensing, spatial analysis, and applications to areas such as land-use planning, development studies, and analyses of specific countries, regions, and resources.
- 45.0702 Cartography.** A program that focuses on the systematic study of map-making and the application of mathematical, computer, and other techniques to the science of mapping geographic information. Includes

instruction in cartographic theory and map projections, computer-assisted cartography, map design and layout, photogrammetry, air photo interpretation, remote sensing, cartographic editing, and applications to specific industrial, commercial, research, and governmental mapping problems.

45.0799 **Geography, Other. (NEW)** Any instructional program in geography not listed above.

[45.08] **History.** (Deleted, Report under 54. Series)

(45.0801) **History, General.** (Moved, Report under 54.0101)

(45.0802) **American (United States) History.** (Moved, Report under 54.0102)

(45.0803) **European History.** (Moved, Report under 54.0103)

(45.0804) **History and Philosophy of Science and Technology.** (Moved, Report under 54.0104)

(45.0805) **Public/Applied History and Archival Administration.** (Moved, Report under 54.0105)

(45.0899) **History, Other.** (Moved, Report under 54.0199)

45.09 **International Relations and Affairs.** Instructional content is defined in code 45.0901.

45.0901 **International Relations and Affairs.** A program that focuses on the systematic study of international politics and institutions, and the conduct of diplomacy and foreign policy. Includes instruction in international relations theory, foreign policy analysis, national security and strategic studies, international law and organization, the comparative study of specific countries and regions, and the theory and practice of diplomacy.

----- **Area Studies.** (Report under 05.01 Series)

----- **Peace Studies and Conflict Resolution.** (Report under 30.0501)

----- **International and Global Studies.** (Report under 30.2001)

----- **Development Economics and International Development.** (Report under 45.0604)

45.10 **Political Science and Government.** Instructional content for this group of programs is defined in codes 45.1001- 45.1099.

45.1001 **Political Science and Government, General.** A general program that focuses on the systematic study of political institutions and behavior. Includes instruction in political philosophy, political theory, comparative government and politics, political parties and interest groups, public opinion, political research methods, studies of the government and politics of specific countries, and studies of specific political institutions and processes.

----- **International Relations and Affairs.** (Report under 45.0901)

- 45.1002 American Government and Politics (United States).** A program that focuses on the systematic study of United States political institutions and behavior. Includes instruction in American political theory, political parties and interest groups, state and local governments, Constitutional law, federalism and national institutions, executive and legislative politics, judicial politics, popular attitudes and media influences, political research methods, and applications to the study of specific issues and institutions.
- **American/United States Studies/Civilization.** (Report under 05.0102)
- **Public Administration.** (Report under 44.0401)
- **Public Policy Analysis.** (Report under 44.0501)
- 45.1003 Canadian Government and Politics. (NEW)** A program that focuses on the systematic study of Canadian political institutions and behavior. Includes instruction in British and North American political theory, political parties and interest groups, provincial and local governments, Constitutional law, federalism and national institutions, executive and legislative politics, judicial politics, popular attitudes and media influences, political research methods, and applications to the study of specific issues and institutions.
- 45.1099 Political Science and Government, Other.** Any instructional program in political science and government not listed above.
- 45.11 Sociology.** Instructional content is defined in code 45.1101.
- 45.1101 Sociology.** A program that focuses on the systematic study of human social institutions and social relationships. Includes instruction in social theory, sociological research methods, social organization and structure, social stratification and hierarchies, dynamics of social change, family structures, social deviance and control, and applications to the study of specific social groups, social institutions, and social problems.
- **AREA, ETHNIC AND CULTURAL STUDIES.** (Report under 05. Series)
- **Social Psychology.** (Report under 42.1601)
- **Social Work.** (Report under 44.0701)
- **Criminology.** (Report under 45.0401)
- **Demography and Population Studies.** (Report under 45.0501)
- 45.12 Urban Studies/Affairs.** Instructional content is defined in code 45.1201.
- 45.1201 Urban Studies/Affairs.** A program that focuses on the application of social science principles to the study of urban institutions and the forces influencing urban social and political life. Includes instruction in urban theory, the development and evolution of urban areas, urban sociology, principles of urban and social planning, and the politics and economics of urban government and services.

----- **City/Urban, Community and Regional Planning.** (Report under 04.0301)

45.99 Social Sciences, Other. Instructional content is defined in code 45.9999.

45.9999 Social Sciences, Other. Any instructional program in social sciences not listed above.

46. CONSTRUCTION TRADES. Instructional programs that prepare individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties.

46.00 Construction Trades, General. (NEW) Instructional content is defined in code 46.0000.

46.0000 Construction Trades, General. (NEW) A program that generally prepares individuals to apply technical knowledge and skills in the building, inspecting, and maintaining of structures and related properties. May include instruction in masonry, carpentry, electrical and power transmission installation, building/construction finishing, management, inspection and other construction-related applications.

46.01 Mason/Masonry. Instructional content is defined in code 46.0101.

46.0101 Mason/Masonry. A program that prepares individuals to apply technical knowledge and skills in the laying and/or setting of brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels, and other hand tools. Includes instruction in technical mathematics, blueprint reading, structural masonry, decorative masonry, foundations, reinforcement, mortar preparation, cutting and finishing, and applicable codes and standards.

46.02 Carpenters. Instructional content is defined in code 46.0201.

46.0201 Carpentry/Carpenter. A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.

46.03 Electrical and Power Transmission Installers. Instructional content for this group of programs is defined in codes 46.0301- 46.0399.

46.0301 Electrical and Power Transmission Installation/Installer, General. A program that generally prepares individuals to apply technical knowledge and skills to install indoor and outdoor residential, commercial, and industrial electrical systems, and associated power transmission lines. Includes instruction in electricity, safety procedures, wiring, insulation

and grounding, schematic blueprint interpretation, equipment operation and maintenance, and applicable codes and standards.

46.0302 **Electrician.** A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.

46.0303 **Lineworker.** A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain and repair local, long-distance, and rural electric power cables and communication lines; erect and construct pole and tower lines; and install underground lines and cables. Includes instruction in cable installation and repair, fibre-optic technology, trenching, mobile equipment and crane operation, high-voltage installations, maintenance and inspection, safety, remote communications, and applicable codes and standards.

46.0399 **Electrical and Power Transmission Installers, Other.** Any instructional program in electrical and power transmission installation not listed above.

46.04 **Building/Construction Finishing, Management, and Inspection.** Instructional content for this group of programs is defined in codes 46.0401– 46.0499.

----- **Construction Management.** (Report under 52.20 Series)

46.0401 **Building/Property Maintenance and Management.** A program that prepares individuals to apply technical knowledge and skills to keep a building functioning, and to service a variety of structures including commercial and industrial buildings and mobile homes. Includes instruction in the basic maintenance and repair skills required to service building systems, such as air conditioning, heating, plumbing, electrical, major appliances, and other mechanical systems.

46.0402 **Concrete Finishing/Concrete Finisher. (NEW)** A program that prepares individuals to prepare, construct, and finish buildings, components, and related structures using compound masonry mixtures of stone, gravel, sand, cement, and water. Includes instruction in site preparation, applied mathematics, mixing formulas and applications, job estimation, concrete design, finishing techniques, mold preparation, reinforcement installation, site safety, and equipment operation and maintenance.

46.0403 **Building/Home/Construction Inspection/Inspector.** A program that prepares individuals to apply industrial, labor, and governmental standards and laws to the oversight of construction projects and the maintenance of completed buildings and other structures. Includes instruction in construction processes and techniques, materials analysis, occupational safety and health, industry standards, building codes and specifications, blueprint interpretation, testing equipment and procedures, communication skills, accident investigation, and documentation.

- **Construction/Engineering Technology/Technician.** (Report under 15.1001)
- 46.0404** **Drywall Installation/Drywaller. (NEW)** A program that prepares individuals to apply technical knowledge and skills to install, tape, and plaster drywall installations in interior and exterior construction jobs. Includes instruction in drywall handling and transport, cutting and mounting, taping and spackling, finishing, job analysis and estimation, site safety, tool operation and maintenance, blueprint and specification interpretation, and applicable codes and standards.
- 46.0406** **Glazier. (NEW)** A program that prepares individuals to apply technical knowledge and skills to install and repair fixtures, sheets, windows, and skylights made of glass, plexiglass, and other transparent materials. Includes instruction in site measurement, job analysis and estimation, material cutting and trimming, window and door installation, site safety, equipment operation and maintenance, specification interpretation, and applicable codes and standards.
- 46.0408** **Painting/Painter and Wall Coverer.** A program that prepares individuals to apply technical knowledge and skills to finish exterior and interior structural surfaces by applying protective or decorative coating materials, such as paint, lacquer, and wallpaper. Includes instruction in surface preparation; selecting, preparing, and applying paints and other coatings; hanging wallpaper; equipment operation and maintenance; finish selection; safety and clean-up; environmental effects on finishes; adhesion properties; and applicable codes and standards..
- 46.0410** **Roofer. (NEW)** A program that prepares individuals to apply technical knowledge and skills to prepare, install, and maintain exterior roofing materials and roofs. Includes instruction in building materials, flashing, lag bolts, site safety, equipment operation and maintenance, layering, site preparation, basic internal structural design, finishing, waterproofing, and applicable codes and standards.
- 46.0411** **Metal Building Assembly/Assembler. (NEW)** A program that prepares individuals to construct industrial, storage, and commercial metal structures using prefabricated framing and siding components. Includes instruction in sheet metal working, ironworking, assembly and fastening techniques, blueprint reading, site preparation, structural design principles, safety, and applicable codes and regulations.
- 46.0412** **Building/Construction Site Management/Manager. (NEW)** A program that prepares individuals to supervise, manage, and inspect construction sites, buildings, and associated facilities. Includes instruction in site safety, personnel supervision, labor relations, diversity training, construction documentation, scheduling, resource and cost control, bid strategies, rework prevention, construction insurance and bonding, accident management and investigation, applicable law and regulations, and communication skills.
- **Construction Management.** (Report under 52.2001)
- 46.0499** **Building/Construction Finishing, Management, and Inspection, Other.** Any instructional program in building/construction finishing, management, and inspection not listed above.

46.05 Plumbing and Related Water Supply Services. Instructional content for this group of programs is defined in codes 46.0502 – 46.0599.

[46.0501] Plumber and Pipefitter. (Deleted, Report under code 46.0502 or 46.0503)

46.0502 Pipefitting/Pipefitter and Sprinkler Fitter. (NEW) A program that prepares individuals to design, install, and test industrial and commercial piping systems and automatic fire and exposure protection systems. Includes instruction in water systems, steam systems, heating and cooling systems, lubricating systems, piping materials, installation tools operation and maintenance, valve installation and repair, technical mathematics, blueprint interpretation, and applicable codes and standards.

46.0503 Plumbing Technology/Plumber. (NEW) A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.

46.0504 Well Drilling/Driller. (NEW) A program that prepares individuals to apply technical knowledge and skills to set up, maintain, repair, and operate well drilling equipment; locate, drill, construct, and develop water, gas, and oil wells; and test and monitor wells to ensure adequate flow. Includes applications to home, business, and industrial uses.

46.0505 Blasting/Blaster. (NEW) A program that prepares individuals to apply technical knowledge and skills in using a variety of explosive materials to aid in the construction process. Includes instruction in safety procedures for storing, handling, placement, charge power determination, drilling, pounding building demolition preparing rocky surfaces for build foundations and demolition of explosives.

46.0599 Plumbing and Related Water Supply Services, Other. (NEW) Any instructional program in plumbing and related water supply services not listed above.

46.99 Construction Trades, Other. Instructional content is defined in code 46.9999.

46.9999 Construction Trades, Other. Any instructional program in construction trades not listed above.

47. MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS. Instructional programs that prepare individuals to apply technical knowledge and skills in the adjustment, maintenance, part replacement, and repair of tools, equipment, and machines.

47.00 *Mechanics and Repairers, General. (NEW)* Instructional content is defined in code 47.0000.

47.0000 *Mechanics and Repairers, General. (NEW)* A program that generally prepares individuals to apply technical knowledge and skills in the adjustment, maintenance, part replacement, and repair of tools, equipment, and machines.

47.01 *Electrical/Electronics Maintenance and Repair Technology.* Instructional content for this group of programs is defined in codes 47.0101 – 47.0199.

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

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

47.0103 *Communications Systems Installation and Repair Technology.* A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair one- and two- way communications equipment and systems, including television cable systems and mobile or stationary communication devices. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of communications systems.

47.0104 *Computer Installation and Repair Technology/Technician.* A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair computers and related instruments. Includes instruction in power supplies, number systems, memory structure, buffers and registers, microprocessor design, peripheral equipment, programming, and networking.

----- ***Computer Systems Technology.*** (Report under 15.1202)

47.0105 *Industrial Electronics Technology/Technician.* A program that prepares individuals to apply technical knowledge and skills to assemble, install, operate, maintain, and repair electrical/electronic equipment used

in industry and manufacturing. Includes instruction in installing, maintaining and testing various types of equipment.

47.0106 Appliance Installation and Repair Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, install, and service major gas, electric, and microwave consumer appliances such as stoves, refrigerators, dryers, water heaters, washers, dishwashers, and commercial units such as ice makers and coffee makers.

47.0110 Security System Installation, Repair, and Inspection Technology/Technician. (NEW) A program that prepares individuals to apply technical knowledge and skills to install and repair household, business, and industrial security alarms, sensors, video and sound recording devices, identification systems, protective barriers, and related technologies.

47.0199 Electrical/Electronics Maintenance and Repair Technology, Other. Any instructional program in electrical and electronics equipment installation and repair not listed above.

47.02 Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician (HAC, HACR, HVAC, HVACR). Instructional content is defined in code 47.0201.

47.0201 Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician (HAC, HACR, HVAC, HVACR). A program that prepares individuals to apply technical knowledge and skills to repair, install, service and maintain the operating condition of heating, air conditioning, and refrigeration systems. Includes instruction in diagnostic techniques, the use of testing equipment and the principles of mechanics, electricity, and electronics as they relate to the repair of heating, air conditioning and refrigeration systems.

Heating, Air Conditioning and Refrigeration Technology/Technician. (Report under 15.0501)

47.03 Heavy/Industrial Equipment Maintenance Technologies. Instructional content for this group of programs is defined in codes 47.0302 – 47.0399.

47.0302 Heavy Equipment Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.

47.0303 Industrial Mechanics and Maintenance Technology. A program that prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.

- 47.0399 Heavy/Industrial Equipment Maintenance Technologies, Other.** Any instructional program in industrial equipment maintenance and repair not listed above.
- 47.04 Precision Systems Maintenance and Repair Technologies.** Instructional content for this group of programs is defined in codes 47.0402 – 47.0499.
- [47.0401] Instrumentation Calibration and Repair.** (Deleted, Report under 15.0404)
- 47.0402 Gunsmithing/Gunsmith.** A program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, and modify firearms according to blueprints or customer specifications, using specialized hand tools and machines.
- 47.0403 Locksmithing and Safe Repair.** A program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, modify, and open locks; to make keys; to enter and change lock and safe combinations; and install and repair safes.
- 47.0404 Musical Instrument Fabrication and Repair.** A program that prepares individuals to apply technical knowledge and skills to make, repair, maintain, and tune acoustic and electric musical instruments. Includes instruction in methods and equipment for making musical instruments, electronic instrument amplification systems, techniques of cleaning, and methods of tuning musical instruments.
- 47.0408 Watchmaking and Jewelmaking.** A program that prepares individuals to apply technical knowledge and skills to make repairs, and maintain timepieces, time-measuring devices, and jewelry items. Includes instruction in mechanical timekeeping systems, digital timekeeping systems, timesetting, casting, engraving, polishing, stonesetting, soldering, fine microscopic work, equipment and tool maintenance, redesign and restyling techniques, and customer relations.
- 47.0409 Parts and Warehousing Operations and Maintenance Technology/Technician. (NEW)** A program that prepares individuals to apply technical knowledge and skills to maintain inventory control, care for inventory, and make minor repairs to warehouse equipment.
- 47.0499 Precision Systems Maintenance and Repair Technologies, Other.** Any instructional program in miscellaneous mechanics and repairers not listed above.
- [47.05] Stationary Energy Sources Installers and Operators.** (Deleted)
- [47.0501] Stationary Energy Sources Installer and Operator.** (Deleted, Report under 47.9999)
- 47.06 Vehicle Maintenance and Repair Technologies.** Instructional content for this group of programs is defined in codes 47.0603 – 47.0699.
- 47.0603 Autobody/Collision and Repair Technology/Technician.** A program that prepares individuals to apply technical knowledge and skills to repair, reconstruct and finish automobile bodies, fenders, and external

features. Includes instruction in structure analysis, damage repair, non-structural analysis, mechanical and electrical components, plastics and adhesives, painting and refinishing techniques, and damage analysis and estimating.

47.0604 Automobile/Automotive Mechanics Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of automobiles. Includes instruction in brake systems, electrical systems, engine performance, engine repair, suspension and steering, automatic and manual transmissions and drive trains, and heating and air condition systems.

Automotive Engineering Technology/Technician. (Report under 15.0803)

47.0605 Diesel Mechanics Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain diesel engines in vehicles such as automobiles, buses, ships, trucks, railroad locomotives, and construction equipment; as well as stationary diesel engines in electrical generators and related equipment.

Agricultural Power Machinery Operator. (Report under 01.0204)

47.0606 Small Engine Mechanics and Repair Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain small internal-combustion engines used on portable power equipment such as lawnmowers, chain saws, rotary tillers, and snowmobiles.

47.0607 Airframe Mechanics and Aircraft Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all aircraft components other than engines, propellers, avionics, and instruments. Includes instruction in layout and fabrication of sheet metal, fabric, wood, and other materials into structural members, parts, and fittings, and replacement of damaged or worn parts such as control cables and hydraulic units.

47.0608 Aircraft Powerplant Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft powerplant and related systems. Instruction includes engine inspection and maintenance, lubrication and cooling, electrical and ignition systems, carburetion, fuels and fuel systems, propeller and fan assemblies.

47.0609 Avionics Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft operating, control, and electronic systems. Includes instruction in flight instrumentation, aircraft communications and homing systems, radar and other sensory systems, navigation aids, and specialized systems for various types of civilian and military aircraft.

Aeronautical and Aerospace Engineering Technology/Technician. (Report under 15.0801)

47.0610 Bicycle Mechanics and Repair Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to

repair, service, and maintain bicycles and other human-powered vehicles. Includes instruction in lubrication, adjustments of moving parts, and wheel building.

47.0611 Motorcycle Maintenance and Repair Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair, service, and maintain motorcycles and other similar powered vehicles. Includes instruction in lubrication and cooling systems, electrical and ignition systems, carburetion, fuel systems and adjustments of moving parts.

47.0612 Vehicle Emissions Inspection and Maintenance Technology/Technician. (NEW) A program that prepares individuals to apply technical knowledge and skills to test, repair, service, and maintain vehicle emission systems in accordance with relevant laws and regulations.

47.0613 Medium/Heavy Vehicle and Truck Technology/Technician. (NEW) A program that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Includes instruction in diesel engine mechanics, suspension and steering, brake systems, electrical and electronic systems, preventive maintenance inspections, drive trains, gasoline engine mechanics, HVAC systems, and auxiliary equipment installation and repair.

47.0614 Alternative Fuel Vehicle Technology/Technician. (NEW) A program that prepares individuals to apply technical knowledge and skills to the maintenance of alternative fuel vehicles and the conversion of standard vehicles to AFV status. Includes instruction in electrical vehicles, liquefied petroleum gas (LPG) vehicles, compressed natural gas, (CNG) vehicles, hybrid fuel technology, electrical and electronic systems, engine performance, diagnosis and repair, and conversion/installation.

47.0615 Engine Machinist. (NEW) A program that prepares individuals to apply technical knowledge and skills to the building and reconstruction of automotive and commercial vehicle engines. Includes instruction in cylinder head and block, crack repair, crankshaft inspection and repair, connecting rods and pistons, balancing, block preparation, disassembly and repair, engine assembly, gas and diesel technology, and inspection and machining.

47.0616 Marine Maintenance/Fitter and Ship Repair Technology/Technician. A program that prepares individuals to apply technical knowledge and skills to repair outboard and inboard engines; test, maintain, and repair steering devices and electrical systems; repair metal, wood, and fiberglass hulls and vessel components; fabricate and maintain sails; and repair and balance propellers and drive shafts. (*Moved from 49.0306*)

47.0699 Vehicle Maintenance and Repair Technologies, Other. Any instructional program in vehicle and mobile equipment mechanics and repairers not listed above.

47.99 Mechanic and Repair Technologies/Technicians, Other. Instructional content is defined in code 47.9999.

47.9999 **Mechanic and Repair Technologies/Technicians, Other.** Any instructional program in mechanics and repairs not listed above.

48. PRECISION PRODUCTION. Instructional programs that prepare individuals to apply technical knowledge and skills to create products using techniques of precision craftsmanship or technical illustration.

48.00 ***Precision Production Trades, General. (NEW)*** Instructional content is defined in code 48.0000.

48.0000 ***Precision Production Trades, General. (NEW)*** A program that generally prepares individuals to apply technical knowledge and skills in creating products using precision crafting and technical illustration.

[48.01] Drafting. (Deleted)

(48.0101) **Drafting, General.** (Moved, Report under 15.1301)

(48.0102) **Architectural Drafting.** (Moved, Report under 15.1303)

(48.0103) **Civil/Structural Drafting.** (Moved, Report under 15.1304)

(48.0104) **Electrical/Electronics Drafting.** (Moved, Report under 15.1305)

(48.0105) **Mechanical Drafting.** (Moved, Report under 15.1306)

(48.0199) **Drafting, Other.** (Moved, Report under 15.1399)

[48.02] Graphic and Printing Equipment Operators. (Deleted)

(48.0201) **Graphic and Printing Equipment Operator, General.** (Moved, Report under 10.0305)

[48.0205] **Mechanical Typesetter and Composer.** (Deleted, Report under 10.0399).

(48.0206) **Lithographer and Platemaker.** (Moved, Report under 10.0306)

(48.0208) **Printing Press Operator.** (Moved, Report under 10.0307)

(48.0211) **Computer Typography and Composition Equipment Operator.** (Moved, Report under 10.0308)

(48.0212) **Desktop Publishing Equipment Operator.** (Moved, Report under 10.0303)

[48.0299] **Graphic and Printing Equipment Operators, Other.** (Deleted, Report under 10.0399)

48.03 **Leatherworking and Upholstery.** Instructional content for this group of programs is defined in codes 48.0303 – 48.0399.

48.0303 **Upholstery/Upholsterer.** A program that prepares individuals to apply technical knowledge and skills to install springs, filling, padding, covering

and finishing on items such as furniture, automobile seats, caskets, mattresses, and bedsprings.

- 48.0304 Shoe, Boot and Leather Repair.** A program that prepares individuals to apply technical knowledge and skills to repair all types of footwear, including replacement and mending of worn parts; repairing orthopedic footwear, refinishing and dyeing leather; and repairing other leather goods such as handbags, belts, and luggage.
- 48.0399 Leatherworking and Upholstery, Other.** Any instructional program in leatherworking and upholstering not listed above.
- 48.05 Precision Metal Working.** Instructional content for this group of programs is defined in codes 48.0501 – 48.0599.
- 48.0501 Machine Tool Technology/Machinist.** A program that prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped or worked.
- 48.0503 Machine Shop Technology/Assistant.** A program that prepares individuals to apply technical knowledge and skills to fabricate and modify metal parts in support of other manufacturing, repair or design activities, or as an independent business.
- 48.0506 Sheet Metal Technology/Sheetworking.** A program that prepares individuals to apply technical knowledge and skills to form, shape, bend and fold extruded metals, including the creation of new products, using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.
- 48.0507 Tool and Die Technology/Technician.** A program that prepares individuals to apply technical knowledge and skills to operate machine tools used in the forming of metal components, as well as the fabrication of special tools, dies, jigs and fixtures used in cutting, working and finishing metal components.
- 48.0508 Welding Technology/Welder.** A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.
- 48.0509 Ironworking/Ironworker. (NEW)** A program that prepares individuals to make and install structural, ornamental, and reinforcing metal structures and supports. Includes instruction in drafting, technical mathematics, blueprint interpretation, welding, riveting, beam placement, ornamental design, structural reinforcement, crane operation, safety, and applicable codes and standards.
- 48.0599 Precision Metal Working, Other.** Any instructional program in precision metal work not listed above.

48.07 Woodworking. Instructional content for this group of programs is defined in codes 48.0701- 48.0799.

48.0701 Woodworking, General. A program that generally prepares individuals to apply technical knowledge and skills to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles, and use a variety of hand and power tools.

48.0702 Furniture Design and Manufacturing. A program that prepares individuals to apply technical knowledge and skills to prepare and execute furniture design projects; assemble and finish furniture articles or subassemblies; repair furniture; and use a variety of hand and power tools.

48.0703 Cabinetmaking and Millwork/Millwright. A program that prepares individuals to apply technical knowledge and skills to set up, operate and repair industrial woodworking machinery, and to use such machinery to design and fabricate wooden components and complete articles.

48.0799 Woodworking, Other. Any instructional program in woodworking not listed above.

48.08 Boilermaking/Boilermaker. (NEW) Instructional content is defined in code 48.0801.

48.0801 Boilermaking/Boilermaker. (NEW) A program that prepares individuals to apply technical knowledge and skills to fabricate and repair steam boiler components. Includes instruction in principles of steam power, material selection, welding, riveting, sealing materials, pressure testing, pipefitting, and applicable codes and standards.

48.99 Precision Production, Other. Instructional content is defined in code 48.9999.

48.9999 Precision Production, Other. Any instructional program in precision production not listed above.

49. TRANSPORTATION AND MATERIALS MOVING. Instructional programs that prepare individuals to apply technical knowledge and skills to perform tasks and services that facilitate the movement of people or materials.

49.01 Air Transportation. Instructional content for this group of programs is defined in codes 49.0101 – 49.0199.

49.0101 Aeronautics/Aviation/Aerospace Science and Technology, General. A program that focuses on the general study of aviation and the aviation industry, including in-flight and ground support operations. Includes instruction in the technical, business, and general aspects of air transportation systems.

- 49.0102** **Airline/Commercial/Professional Pilot and Flight Crew.** A program that prepares individuals to apply technical knowledge and skills to the flying and/or navigation of commercial passenger and cargo, agricultural, public service, corporate and rescue fixed wing aircraft. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications; navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to sit for the FAA commercial and airline aircrew examinations.
- 49.0104** **Aviation/Airway Management and Operations.** A program that prepares individuals to apply technical knowledge and skills to the management of aviation industry operations and services. Includes instruction in airport operations, ground traffic direction, ground support and flightline operations, passenger and cargo operations, flight safety and security operations, aviation industry regulation, and related business aspects of managing aviation enterprises.
- 49.0105** **Air Traffic Controller.** A program that prepares individuals to apply technical knowledge and skills to 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.
- 49.0106** **Airline Flight Attendant.** A program that prepares individuals to apply technical knowledge and skills to the performance of a variety of personal services conducive to the safety and comfort of airline passengers during flight, including verifying tickets, explaining the use of safety equipment, providing passenger services, and responding to in-flight emergencies.
- (49.0107)** **Aircraft Pilot (Private).** (Moved, Report under code 36.0119 in chapter V.)
- 49.0108** **Flight Instructor. (NEW)** A program that prepares individuals to apply technical knowledge and skills to the training pilot or navigators to fly and/or navigate commercial passenger and cargo, agricultural, public service, corporate and rescue aircraft, fixed or rotary wing. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft. Programs may qualify individuals to administer the FAA commercial air crew examinations.
- 49.0199** **Air Transportation, Other.** Any instructional program in aviation and air transportation services not listed above.
- 49.02** **Ground Transportation.** Instructional content for this group of programs is defined in codes 49.0202 – 49.0299.
- 49.0202** **Construction/Heavy Equipment/Earthmoving Equipment Operation.** A program that prepares individuals to apply technical knowledge and

skills to operate and maintain a variety of heavy equipment, such as a crawler tractors, motor graders and scrapers, shovels, rigging devices, hoists, and jacks. Includes instruction in digging, ditching, sloping, strip-ping, grading, and backfilling, clearing and excavating.

Agricultural Power Machinery Operator. (Report under 01.0204)

49.0205 **Truck and Bus Driver/Commercial Vehicle Operation.** A program that prepares individuals to apply technical knowledge and skills to drive trucks and buses, delivery vehicles, for-hire vehicles and other commercial vehicles. Includes instruction in operating gas, diesel, or electrically-powered vehicles; loading and unloading cargo or passengers; reporting delays or accidents on the road; verifying load against shipping papers; arranging transportation for personnel; and keeping records of receipts and fares.

49.0206 **Mobil Crane Operation/Operator. (NEW)** A program that prepares individuals to hoist and swing loads via complex rotating machinery that is driver operated. Includes instruction in crane operational characteristics, load and capacity chart usage, emergency control skills, safety, specific types of mobile cranes and loading devices, applicable codes and standards, and applications to particular types of jobs and loads.

49.0299 **Ground Transportation, Other.** Any instructional program in vehicle and equipment operation not listed above.

49.03 **Marine Transportation.** Instructional content for this group of programs is defined in codes 49.0303 – 49.0399.

49.0303 **Commercial Fishing.** A program that prepares individuals to apply technical knowledge and skills to function as commercial fishermen, fishing operations supervisors or in related fishing industry operations. Includes instruction in fishing vessel operation; fishing equipment operation and maintenance; equipment repair; catch identification, sorting, and storage; safety procedures; record keeping; and applicable legal regulations.

49.0304 **Diver, Professional and Instructor.** A program that prepares individuals to apply technical knowledge and skills to function as professional deep-water or scuba divers, diving instructors, or diving support personnel. Includes instruction in the use of diving equipment and related specialized gear; diving safety procedures; operation and maintenance of underwater life-support systems; underwater communication systems; decompression systems; underwater salvage; exploration, rescue, and photography; and installation and fitting of underwater mechanical systems and their maintenance, repair or demolition.

(49.0306) **Marine Maintenance and Ship Repairer.** (Moved, Report under 47.0616)

49.0309 **Marine Science/Merchant Marine Officer.** A program that prepares individuals to serve as captains, executive officers, engineers and ranking mates on commercially licensed inland, coastal and ocean-going vessels. Includes instruction in maritime traditions and law; maritime policy; economics and management of commercial marine operations;

basic naval architecture and engineering; shipboard power systems engineering; crew supervision; and administrative procedures.

49.0399 Marine Transportation, Other. Any instructional program in water transportation not listed above.

49.99 Transportation and Materials Moving, Other. Instructional content is defined in code 49.9999.

49.9999 Transportation and Materials Moving, Other. Any instructional program in transportation and materials moving not listed above.

50. VISUAL AND PERFORMING ARTS. Instructional programs that focus on the creation and interpretation of works and performances that use auditory, kinesthetic, and visual phenomena to express ideas and emotions in various forms, subject to aesthetic criteria.

50.01 Visual and Performing Arts, General. Instructional content is defined in code 50.0101.

50.0101 Visual and Performing Arts, General. A general, undifferentiated program that focuses on the visual and performing arts and that may prepare individuals in any of the visual artistic media or performing disciplines.

50.02 Crafts/Craft Design, Folk Art and Artisanry. Instructional content is defined in code 50.0201.

----- **Fine Arts and Art Studies.** (Report under 50.07 Series)

50.0201 Crafts/Craft Design, Folk Art and Artisanry. A program that focuses on the aesthetics, techniques, and creative processes for designing and fashioning objects in one or more of the handcraft or folk art traditions, and that prepares individuals to create in any of these media.

----- **Ceramics Arts and Ceramics.** (Report under 50.0711)

----- **Fiber, Textiles and Weaving Arts.** (Report under 50.0712)

----- **Metal and Jewelry Arts.** (Report under 50.0713)

50.03 Dance. Instructional content for this group of programs is defined in codes 50.0301 – 50.0399.

50.0301 Dance, General. A general program that prepares individuals to express ideas, feelings, and/or inner visions through the performance of one or more of the dance disciplines, including but not limited to ballet, modern, jazz, ethnic, and folk dance, and that focuses on the study and analysis of dance as a cultural phenomenon. Includes instruction in technique, choreography, Laban notation, dance history and criticism, and dance production.

----- **Drama/Theatre Arts and Stagecraft.** (Report under 50.05 Series)

----- **Music.** (Report under 50.09 Series)

- **Drama and Dance Teacher Education.** (Report under 13.1324)
- **Dance Therapy/Therapist.** (Report under 51.2302)
- 50.0302** **Ballet. (NEW)** A program that prepares individuals to express ideals and feelings through interpretation of classical dance choreography. Includes instruction in ballet exercise, solo and ensemble dance, history of ballet, ballet choreography, Laban notation, ballet technique, and interpretations of specific styles and schools.
- 50.0399** **Dance, Other. (NEW)** Any instructional program in dance not listed above.
- 50.04 Design and Applied Arts.** Instructional content for this group of programs is defined in codes 50.0401 – 50.0499.
- **Fine Arts and Art Studies.** (Report under 50.07 Series)
- 50.0401** **Design and Visual Communications, General.** A program in the applied visual arts that focuses on the general principles and techniques for effectively communicating ideas and information, and packaging products, in digital and other formats to business and consumer audiences, and that may prepare individuals in any of the applied art media.
- 50.0402** **Commercial and Advertising Art.** A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of digital or printed media. Includes instruction in concept design, layout, paste-up, and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage, and computer graphics.
- 50.0404** **Industrial Design.** A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via the creation of effective forms, shapes, and packaging for manufactured products. Includes instruction in designing in a wide variety of plastic and digital media, prototype construction, design development and refinement, principles of cost saving, and product structure and performance criteria relevant to aesthetic design parameters.
- 50.0406** **Commercial Photography.** A program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences, and recording events and people, via digital, film, still and video photography. Includes instruction in specialized camera and equipment operation and maintenance, applications to commercial and industrial needs, and photography business operations.
- **Film/Video and Photographic Arts.** (Report under 50.06 Series)

- 50.0407 Fashion/Apparel Design.** A program that prepares individuals to apply artistic principles and techniques to the professional design of commercial fashions, apparel, and accessories, and the management of fashion development projects. Includes instruction in apparel design; accessory design; the design of men's, women's, and children's wear; flat pattern design; computer-assisted design and manufacturing; concept planning; designing in specific materials; labor and cost analysis; history of fashion; fabric art and printing; and the principles of management and operations in the fashion industry.
- 50.0408 Interior Design.** A program in the applied visual arts that prepares individuals to apply artistic principles and techniques to the professional planning, designing, equipping, and furnishing residential and commercial interior spaces. Includes instruction in computer applications drafting and graphic techniques; principles of interior lighting, acoustics, systems integration, and color coordination; furniture and furnishings; textiles and their finishing; the history of interior design and period styles; basic structural design; building codes and inspection regulations; and applications to office, hotel, factory, restaurant and housing design.
- **Interior Architecture.** (Report under 04.0501)
- **Housing and Human Environments.** (Report under 19.06 Series)
- 50.0409 Graphic Design. (NEW)** A program that prepares individuals to apply artistic and computer techniques to the interpretation of technical and commercial concepts. Includes instruction in computer-assisted art and design, printmaking, concepts sketching, technical drawing, color theory, imaging, studio technique, still and life modeling, communication skills and commercial art business operations.
- 50.0410 Illustration. (NEW)** A program that prepares individuals to use artistic techniques to develop and execute interpretations of the concepts of authors and designers to specifications. Includes instruction in book illustration, fashion illustration, map illustration, rendering, exhibit preparation, textual layout, cartooning, and the use of various artistic techniques as requested by clients.
- **Medical Illustration.** (Report under 51.2703)
- 50.0499 Design and Applied Arts, Other.** Any instructional program in design and applied arts not listed above.
- 50.05 Drama/Theatre Arts and Stagecraft.** Instructional content for this group of programs is defined in codes 50.0501 – 50.0599.
- **Foreign Languages and Literatures.** (Report under 16. Series)
- **English Language and Literature/Letters.** (Report under 23. Series)
- 50.0501 Drama and Dramatics/Theatre Arts, General.** A program that focuses on the general study of dramatic works and their performance. Includes instruction in major works of dramatic literature, dramatic styles and types, and the principles of organizing and producing full live or filmed productions.

- 50.0502** **Technical Theatre/Theatre Design and Technology.** A program that prepares individuals to apply artistic, technical and dramatic principles and techniques to the communication of dramatic information, ideas, moods, and feelings through technical theatre methods. Includes instruction in set design, lighting design, sound effects, theatre acoustics, scene painting, property management, costume design, and technical direction and production and use of computer applications to support these functions above.
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- Make-up Artist/Specialist.** (Report under 12.0406)
- [50.0503]** **Acting and Directing.** (Deleted, Report under 50.0506 and 50.0507)
- 50.0504** **Playwriting and Screenwriting.** A program that focuses on the principles and techniques for communicating dramatic information, ideas, moods, and feelings through the composition of creative written works for the theatre and/or film. Includes instruction in creative writing craft, scene writing, script development, stage and/or camera instructions, line and moment analysis, script reading, script editing, and the creation of full productions
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- Creative Writing.** (Report under 23.0501)
- 50.0505** **Theatre Literature, History and Criticism.** A program that focuses on the study of the history, literature, theory, and analysis of written plays, theatrical productions, and theatre methods and organization. Includes instruction in historical method; critical theory; literary analysis; the study of themes and archetypes in dramatic literature; the history of acting, directing, and technical theatre; and the study of specific historical and cultural styles and traditions.
- 50.0506** **Acting. (NEW)** A program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the achievement of naturalistic and believable behavior in imaginary circumstances. Includes instruction in voice and acting speech, stage dialects, movement, improvisation, acting styles, theatre history, script interpretation, and actor coaching.
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- Speech and Rhetorical Studies.** (Report under 23.1001)
- 50.0507** **Directing and Theatrical Production. (NEW)** A program that prepares individuals to manage the planning, design, preparation, and production of plays and other theatrical entertainment programs. Includes instruction in theatrical design, program management, dramatic production, rehearsal management, personnel management and casting, actor coaching, directing concepts and techniques, theater history, scene work, script interpretation, business management, marketing, public relations, and communications skills.
- 50.0508** **Theatre/Theatre Arts Management. (NEW)** A program that prepares individuals to apply business management principles to the management of theatres and production corporations. Includes instruction in theatrical production, theatre design and planning, fund-raising and promotion, investment strategies, human resources management, theatre operations management, marketing, public relations, financial management and insurance, and applicable laws and regulations.

- 50.0599 Dramatic/Theatre Arts and Stagecraft, Other.** Any instructional program in dramatic/theatre arts and stagecraft not listed above.
- 50.06 Film/Video and Photographic Arts.** Instructional content for this group of programs is defined in codes 50.0601 – 50.0699.
- 50.0601 Film/Cinema Studies.** A program in the visual arts that focuses on the study of the history, development, theory, and criticism of the film/video arts, as well as the basic principles of film making and film production.
- 50.0602 Cinematography and Film/Video Production.** A program that prepares individuals to communicate dramatic information, ideas, moods, and feelings through the making and producing of films and videos. Includes instruction in theory of film; film technology and equipment operation; film production; film directing; film editing; cinematographic art; film audio; techniques for making specific types of films and/or videos; the use of computer applications to record or enhance images, audio or effect and the planning and management of film/video operations.
- 50.0605 Photography.** A program that focuses on the principles and techniques of communicating information, ideas, moods, and feelings through the creation of images on photographic film, plates, digital images and that may prepare individuals to be professional photographic artists. Includes instruction in camera and equipment operation and maintenance, film and plate developing, light and composition, films and printing media, color and special effects, photographic art, photographic history, use of computer applications to record or enhance images and applications to the photography of various subjects.
- **Photographic Technology/Technician.** (Report under 10.0201)
- **Commercial Photography.** (Report under 50.0406)
- **Animation, Interactive Technology, Video Graphics and Special Effects.** (Report under 10.0304)
- 50.0699 Film/Video and Photographic Arts, Other.** Any instructional program in film/video and photographic arts not listed above.
- 50.07 Fine and Studio Art.** Instructional content for this group of programs is defined in codes 50.0701 – 50.0799.
- **Crafts, Folk Art and Artisanry.** (Report under 50.0201)
- **Design and Commercial Arts.** (Report under 50.04 Series)
- 50.0701 Art/Art Studies, General.** A general program that focuses on the introductory study and appreciation of the visual arts. Includes instruction in art, photography, and other visual communications media.
- **Art Teacher Education.** (Report under 13.1302)
- **Art Therapy/Therapist.** (Report under 51.2301)

- 50.0702 Fine/Studio Arts, General.** A program that prepares individuals to generally function as creative artists in the visual and plastic media. Includes instruction in the traditional fine arts media (drawing, painting, sculpture, printmaking, CAD/CAM) and/or modern media (ceramics, textiles, intermedia, photography, digital images); theory of art; color theory; composition and perspective; anatomy; the techniques and procedures for maintaining equipment and managing a studio; and art portfolio marketing.
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- Photography.** (Report under 50.0605)
- 50.0703 Art History, Criticism and Conservation.** A program that focuses on the study of the historical development of art as social and intellectual phenomenon, the analysis of works of art, and art conservation. Includes instruction in the theory of art, art history research methods, connoisseurship, the preservation and conservation of works of art, and the study of specific periods, cultures, styles, and themes.
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- Historic Preservation, Conservation and Architectural History.**
(Report under 30.12 Series)
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- Museology/Museum Studies.** (Report under 30.1401)
- 50.0704 Arts Management.** A program that prepares individuals to organize and manage art organizations, operations, and facilities. Includes instruction in business and financial management; marketing and fundraising; personnel management and labor relations; event promotion and management; public relations and arts advocacy; arts law; and applications to specific arts activities such as galleries, museums, studios, foundations, and community organizations.
- 50.0705 Drawing.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions through representation by lines made on a surface. Includes instruction in eye-hand coordination; line, value, shape, and perspective; figure and still life drawing; the use of media such as pen and ink, pencil, charcoal, pastel, and brush; and personal style development.
- 50.0706 Intermedia/Multimedia.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions in either two or three dimensions, through simultaneous use of a variety of materials and media.
- 50.0708 Painting.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by the application of paints and related chemical color substances to canvases or other materials. Includes instruction in color and color mixing; surface preparation; composition; oil and acrylic media; watercolor media; painting techniques; and personal style development.

- 50.0709** **Sculpture.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by creating three-dimensional art works. Includes instruction in the analysis of form in space; round and relief concepts; sculptural composition; modern and experimental methods; different media such as clay, plaster, wood, stone, and metal; techniques such as carving, molding, welding, casting, and modeling; and personal style development.
- 50.0710** **Printmaking.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by rendering art concepts onto surfaces and transferring images, via ink or dyes, onto paper or fabric. Includes instruction in monochrome and color printing; tonality; chemistry; equipment set-up and maintenance; techniques such as serigraphy, lithography, intaglio, woodcut, block, stencil, relief, etching, and composite; and personal style development.
- 50.0711** **Ceramic Arts and Ceramics.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by producing art works out of clay and similar materials. Includes instruction in handbuilt and wheelthrown techniques; molding; slips and glazes; trimming and decorating; firing and kiln operation; oxidation; mixed media; ceramic murals; and personal style development.
- 50.0712** **Fiber, Textile and Weaving Arts.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by constructing art works from woven or non-woven fabrics and fibrous materials. Includes instruction in weaving techniques and loom operation; non-woven techniques such as knitting, coiling, netting, and crocheting; quilting; dyeing and pigmentation; printing and other finishing techniques; pattern design; tapestry; and personal style development.
- 50.0713** **Metal and Jewelry Arts.** A program that prepares individuals creatively and technically to express emotions, ideas, or inner visions by fashioning art works from gems, other stones, and precious metals. Includes instruction in gemology; metalsmithing and finishing; stone cutting and polishing; metal and non-metal casting and molding; electroforming; metal coloring; enameling; photo etching; lapidary technique and art; design concepts; and personal style development.
- 50.0799** **Fine Arts and Art Studies, Other.** Any instructional program in fine arts and art studies not listed above.
- 50.09** **Music.** Instructional content for this group of programs is defined in codes 50.0901 – 50.0999.
- 50.0901** **Music, General.** A general program that focuses on the introductory study and appreciation of music and the performing arts. Includes instruction in music, dance, and other performing arts media.
- **Music Teacher Education.** (Report under 13.1312)
- **Religious/Sacred Music.** (Report under 39.0501)
- **Musical Instrument Repairer.** (Report under 47.0404)
- **Music Therapy/Therapist.** (Report under 51.2305)

- 50.0902 Music History, Literature, and Theory.** A program that focuses on the study of the historical evolution of music as a social and intellectual phenomenon, the development of musical instruments and techniques, and the analysis and criticism of musical literature. Includes instruction in music history research methods, aesthetic analysis of musical compositions, history of musical writing and notation, the development of musical instruments, the development of music theory, and the study of specific periods, cultural traditions, styles, and themes.
- 50.0903 Music Performance, General.** A program that generally prepares individuals to master musical instruments and performing art as solo and/or ensemble performers. Includes instruction on one or more specific instruments from various instrumental groupings.
- 50.0904 Music Theory and Composition.** A program that focuses on the study of the principles of sound manipulation as applied to the creation of music, and the techniques of creating and arranging music. Includes instruction in aural theory, melody, counterpoint, complex harmony, modulation, chromatics, improvisation, progressions, musical writing, instrumentation, orchestration, electronic and computer applications, studies of specific musical styles, and development of original creative ability.
- 50.0905 Musicology and Ethnomusicology.** A program that focuses on the systematic study of the forms and methods of music art, and the functions of music, in Western and non-Western societies and cultures. Includes instruction in music theory, musicological research methods, and studies of specific cultural styles such as jazz, folk music, rock, ethnic musical traditions, and the music of non-Western cultures.
- 50.0906 Conducting.** A program that prepares individuals to master the art of leading bands, choirs, orchestras and other ensembles in performance, and related music leadership. Includes instruction in score analysis and arranging, rehearsal and performance leadership, music coaching, arrangement and performance planning, ensemble operations management, and applications to specific school or professional ensembles.
- 50.0907 Piano and Organ.** A program that prepares individuals to master the piano, organ, or related keyboard instruments and performing art as solo, ensemble, and/or accompanist performers. Includes instruction in piano and keyboard pedagogy, ensemble playing, accompanying, service playing, repertoire, keyboard and pedal skills, recital, and personal style development.
- 50.0908 Voice and Opera.** A program that prepares individuals to master the human voice and performing art as solo and/or ensemble performers in concert, choir, opera, or other forms of singing. Includes instruction in voice pedagogy, diction, vocal physiology and exercise, expressive movement, repertoire, recital, and personal style development.
- 50.0909 Music Management and Merchandising.** A program that prepares individuals to organize and manage music organizations, operations, facilities, and personnel. Includes instruction in business and financial management; marketing and fundraising; personnel management and labor relations; event promotion and management; music products merchandising; artist agency and promotion; music law; and applications

to specific activities such as managing theaters, recording studios and companies, bands and other ensembles, individual artists, and music organizations.

50.0910 **Jazz/Jazz Studies. (NEW)** A program that prepares individuals to study and master the performance and composition of jazz. Includes instruction in the history of Jazz and related musical styles such as the Blues, Jazz composition and theory, improvisation, Jazz instrument and ensemble performance, and related topics.

50.0911 **Violin, Viola, Guitar and Other Stringed Instruments. (NEW)** A program that prepares individual to master a stringed instrument and performing arts as solo, ensemble and/or accompanist performers. Includes instruction in playing and personal style development.

50.0912 **Music Pedagogy. (NEW)** A program that prepares individuals to provide musical instruction and tutoring to clients in private and institutional settings. Includes instruction in music theory, music composition, mastery of one or more instruments, familiarity with various musical genres and styles, principles of music education, and client communications.

50.0999 **Music, Other.** Any instructional program in music not listed above.

50.99 **Visual and Performing Arts, Other.** Instructional content is defined in code 50.9999.

50.9999 **Visual and Performing Arts, Other.** Any instructional program in visual and performing arts not listed above.

51. **HEALTH PROFESSIONS AND RELATED CLINICAL SCIENCES.** Instructional programs that prepare individuals to practice as licensed professionals and assistants in the health care professions and focus on the study of related clinical sciences.

----- **AGRICULTURE, AGRICULTURAL OPERATIONS AND RELATED SCIENCES.** (Report under 01. Series)

----- **BIOLOGICAL AND BIOMEDICAL SCIENCES.** (Report under 26. Series)

----- **INTERDISCIPLINARY STUDIES.** (Report under 30. Series)

51.00 **Health Services/Allied Health/Health Sciences, General. (NEW)** Instructional content is defined in code 51.0000.

51.0000 **Health Services/Allied Health/Health Sciences, General. (NEW)** A general, introductory, undifferentiated, or joint program in health services occupations that prepares individuals for either entry into specialized training programs or for a variety of concentrations in the allied health area. Includes instruction in the basic sciences, research and clinical procedures, and aspects of the subject matter related to various health occupations.

51.01 **Chiropractic (DC).** Instructional content defined in code 51.0101

51.0101 Chiropractic (DC). A program that prepares individuals for the independent professional practice of chiropractic, a health care and healing system based on the application of non-invasive treatments and spinal adjustments to alleviate health problems caused by vertebral misalignments affecting bodily function as derived from the philosophy of Daniel Palmer. Includes instruction in the basic medical sciences, chiropractic theory and science, postural and spinal analysis, diagnostic radiology and ultrasound, adjustment technique, patient counseling, professional standards and ethics, and practice management.

51.02 Communication Disorders Sciences and Services. Instructional content for this group of programs is defined in codes 51.0201– 51.0299.

51.0201 Communication Disorders, General. A program that focuses on the general study of the application of biomedical, psychological, and physical principles to the study of the genesis, development, and treatment of speech, language, hearing, and cognitive communication problems caused by disease, injury, or disability. Includes instruction in language science, hearing science, speech and voice science, biology of communication, behavioral linguistics, psychology, and applications to the development of diagnostic and rehabilitative strategies and technologies.

Education/Teaching of Individuals with Hearing Impairments Including Deafness. (Report under 13.1003)

American Sign Language (ASL). (Report under 16.1601)

Sign Language Interpretation and Translation. (Report under 16.1603)

51.0202 Audiology/Audiologist and Hearing Sciences. A program that focuses on the scientific study of hearing processes and hearing loss, and that prepares individuals to diagnose hearing loss and impairments and advise patients on means to use their remaining hearing and select and fit hearing aids and other devices. Includes instruction in acoustics, anatomy and physiology of hearing, hearing measurement, auditory pathology, middle and inner ear analysis, rehabilitation therapies and assistive technologies, and pediatric and other special applications.

51.0203 Speech-Language Pathology/Pathologist. A program that prepares individuals to evaluate the speaking, language interpretation, and related physiological and cognitive capabilities of children and/or adults and develop treatment and rehabilitative solutions in consultation with clinicians and educators. Includes instruction in the anatomy and physiology of speech and hearing; biomechanics of swallowing and vocal articulation; communications disorders; psychology of auditory function and cognitive communication; language assessment and diagnostic techniques; and rehabilitative and management therapies.

51.0204 Audiology/Audiologist and Speech-Language Pathology/Pathologist. An integrated or coordinated program that prepares individuals as audiologists and speech-language pathologists. Includes instruction in a variety of communication disorder studies, audiology, speech pathology, language acquisition, and the design and implementation of comprehensive therapeutic and rehabilitative solutions to communications problems.

- 51.0205** **Sign Language Interpretation/Interpreter.** (Moved, Report under 16.1603)
- 51.0299** **Communication Disorders Sciences and Services, Other.** Any instructional program in communications disorders sciences and services not listed above.

[51.03] Community Health Services. [Deleted]

- (51.0301)** **Community Health Liaison.** (Moved, Report under 51.1504)

51.04 Dentistry (DDS, DMD). Instructional content is defined in code 51.0401.

- 51.0401** **Dentistry (DDS, DMD).** A program that prepares individuals for the independent professional practice of dentistry/dental medicine, encompassing the evaluation, diagnosis, prevention, and treatment of diseases, disorders, and conditions of the oral cavity, maxillofacial area, and adjacent structures and their impact on the human body and health. Includes instruction in the basic biomedical sciences; occlusion; dental health and prevention; oral pathology; cariology; operative dentistry; oral radiology; principles of the various dental specialties; pain management; oral medicine; clinic and health care management; patient counseling; and professional standards and ethics.

51.05 Advanced/Graduate Dentistry and Oral Sciences (Cert., MS, PhD). Instructional content for this group of programs is defined in codes 51.0501– 51.0599.

Note ➤ *Only graduate programs awarding academic credit and degrees or certificates should be reported in this series. Dental residencies should be reported under Series 60.01 in chapter II.*

- 51.0501** **Dental Clinical Sciences, General (MS, PhD).** An integrated or undifferentiated program that generally prepares dentists in one or more of the oral sciences and advanced/graduate dentistry specialties.

- 51.0502** **Advanced General Dentistry (Cert., MS, PhD). (NEW)** A program that focuses on the advanced study of dental clinical techniques and dental practice issues. Includes instruction in subjects such as the history of dentistry; advanced dental practice management; dental ethics and jurisprudence; social and behavioral science studies of dentistry; advanced restorative dentistry; oral medicine; oral radiology; advanced clinical procedures and technology; and others.

- 51.0503** **Oral Biology and Oral Pathology (MS, PhD). (NEW)** A program that focuses on the scientific study of the growth, development, diseases, healing properties, and neurological components of the oral cavity, related tissues and organs, and associated craniofacial areas. Includes instruction in oral microbiology microanatomy, craniofacial pain, humoral aspects of disease, etiology and histology of caries, plaque ecology, wound healing, oral disease epidemiology, oral manifestations of systemic disease, lesions, normal and pathologic physiology, and related molecular and physical studies.

- 51.0504** **Dental Public Health and Education (Cert., MS/MPH, PhD/DPH). (NEW)** A program that focuses on the scientific study of dental disease prevention and control, community dental health promotion, and

prepares dentists and public health professionals to function as dental health specialists. Includes instruction in preventive dentistry; the relationship of oral disease to health and quality of life; patient and practitioner behavior; dental epidemiology; nutrition and dental health; dental care policy and delivery; oral health program planning and administration; biostatistics; and research methods.

- 51.0505** **Dental Materials (MS, PhD). (NEW)** A program that focuses on the scientific study of the biomaterials and inert and active compounds used in dental procedures; the development of dental materials; and their effects on the living tissues of the oral cavity and systemic bodily health. Includes instruction in materials science, dental bioengineering, biocompatibility of materials; physics and mechanics of dental materials; elastic and plastic deformation; surface bonding; and applications to fixed and removable prostheses and restorative procedures.
- 51.0506** **Endodontics/Endodontology (Cert., MS, PhD). (NEW)** A program that focuses on the advanced study of the morphology, physiology, and pathology of human dental pulp and periradicular tissues, and prepares dentists to diagnose and treat internal diseases and injuries of teeth. Includes instruction in theory and practice of endodontics; pulpal disease; relationship of endodontic conditions to other dental/oral health issues; endodontic operative technique; and patient care and management.
- 51.0507** **Oral/Maxillofacial Surgery (Cert., MS, PhD). (NEW)** A program that focuses on the advanced study of the diagnosis and intrusive and adjunctive treatment of diseases, injuries, and defects of the oral and maxillofacial regions, including functional and aesthetic aspects. Includes instruction in pharmacology, analgesia, anesthesia, anxiety control, surgical procedures and techniques, surgical instrumentation, exodontia, oral diseases and malfunctions, soft and hard tissue pathology, dentoalveolar surgery, infection management, and prosthetic implantation.
- 51.0508** **Orthodontics/Orthodontology (Cert., MS, PhD). (NEW)** A program that focuses on the advanced study of the guidance of growing dental structures and the correction of misalignments, disproportionate growth, and traumas caused by genetics, disease, injuries, and dysfunctional behaviors. Includes instruction in malocclusion, design and fabrication of orthodontic appliances, craniofacial alignment, physiological function and analysis, cephalometrics, model analysis, space analysis, surgical orthodontics, cleft lip and palate, and treatment planning and management.
- 51.0509** **Pediatric Dentistry/Pedodontics (Cert., MS, PhD). (NEW)** A program that focuses on the advanced study of the therapeutic and preventive care of the oral health of children from birth through adolescence, and the care of adults with physical, mental, and emotional disabilities. Includes instruction in developmental oral biology, preventive medicine, diet therapy and counseling, patient management, pediatric restorative procedures, pulp therapy, trauma management, anesthesia, treatment planning, patient management, and the treatment of handicapped patients.
- 51.0510** **Periodontics/Periodontology (Cert., MS, PhD). (NEW)** A program that focuses on the advanced study of the etiology and treatment of diseases of the gingivae (gum tissue) and supporting bone, nerve, and

vascular structures. Includes instruction in periodontium pathology, diagnostic procedures and equipment, occlusion, nutritional aspects of periodontology, surgical treatments, and patient care and management.

51.0511 ***Prosthodontics/Prosthodontology (Cert., MS, PhD). (NEW)***
A program that focuses on the advanced study of the restoration and maintenance of teeth, oral function, and aesthetic form through the use of single or compound materials, structures, and artificial devices. Includes instruction in implant dentistry, surgical procedures, denture design and fabrication, fixed and removable prosthodontics, restorative techniques, occlusion therapy and devices, geriatric dentistry, cosmetic dentistry, and temporomandibular joint dysfunction.

51.0599 ***Advanced/Graduate Dentistry and Oral Sciences, Other. (NEW)***
Any instructional program in advanced/graduate dentistry and oral sciences not listed above.

51.06 **Dental Support Services and Allied Professions.** Instructional content for this group of programs is defined in codes 51.0601– 51.0699.

51.0601 **Dental Assisting/Assistant.** A program that prepares individuals to provide patient care, take dental radiographs (x-ray photographs), prepare patients and equipment for dental procedures, and discharge office administrative functions under the supervision of dentists and dental hygienists. Includes instruction in medical record-keeping, general office duties, reception and patient intake, scheduling, equipment maintenance and sterilization, basic radiography, pre- and post-operative patient care and instruction, chairside assisting, taking tooth and mouth impressions, and supervised practice.

51.0602 **Dental Hygiene/Hygienist.** A program that prepares individuals to clean teeth and apply preventive materials; provide oral health education and treatment counseling to patients; identify oral pathologies and injuries; and manage dental hygiene practices. Includes instruction in dental anatomy, microbiology, and pathology; dental hygiene theory and techniques; cleaning equipment operation and maintenance; dental materials; radiology; patient education and counseling; office management; supervised clinical training; and professional standards.

51.0603 **Dental Laboratory Technology/Technician.** A program that prepares individuals, under the supervision of dentists, to design and construct dental prostheses such as caps, crowns, bridges, dentures, splints, and orthodontic appliances. Includes instruction in dental anatomy, dental materials, ceramics technology, impressions, complete dentures, partial dentures, orthodontics, crowns and bridges, sculpture, bonding and assembly techniques, and equipment operation.

51.0699 **Dental Services and Allied Professions, Other.** Any instructional program in dental services and allied professions not listed above.

51.07 **Health and Medical Administrative Services.** Instructional content for this group of programs is defined in codes 51.0701– 51.0799.

51.0701 **Health/Health Care Administration/Management.** A program that prepares individuals to develop, plan, and manage health care operations and services within health care facilities and across health

care systems. Includes instruction in planning, business management, financial management, public relations, human resources management, health care systems operation and management, health care resource allocation and policy making, health law and regulations, and applications to specific types of health care services.

- 51.0702 Hospital and Health Care Facilities Administration/Management.** A program that prepares individuals to apply managerial principles to the administration of hospitals, clinics, nursing homes, and other health care facilities. Includes instruction in facilities planning, building and operations management, business management, financial management and insurance, fund-raising and marketing, public relations, human resources management and labor relations, health care facilities operations, principles of health care delivery, and applicable law and regulations.
- 51.0703 Health Unit Coordinator/Ward Clerk.** A program that prepares individuals, under the supervision of nurses or ward supervisors, to perform routine administrative and reception duties in a patient care unit within a hospital or other health care facility. Includes instruction in receiving and directing visitors, transcribing medical and nursing orders, preparing requisition forms, scheduling patient appointments and procedures, monitoring patients and personnel, and interpersonal skills.
- 51.0704 Health Unit Manager/Ward Supervisor.** A program that prepares individuals, under the supervision of nursing or medical service administrators, to supervise and coordinate the operations of one or more patient care units in hospitals or other health care facilities. Includes instruction in planning and initiating administrative procedures, personnel supervision, interpersonal skills, general and/or specialized health care operations and procedures, and consultation with other medical, nursing, and administrative team members.
- 51.0705 Medical Office Management/Administration.** A program that prepares individuals to manage the specialized business functions of a medical or clinical office. Includes instruction in business office operations, business and financial record-keeping, personnel supervision, medical and health care policy administration, conference planning, scheduling and coordination, public relations, and applicable law and regulations.
- 51.0706 Health Information/Medical Records Administration/Administrator.** A program that prepares individuals to plan, design, and manage systems, processes, and facilities used to collect, store, secure, retrieve, analyze, and transmit medical records and other health information used by clinical professionals and health care organizations. Includes instruction in the principles and basic content of the biomedical and clinical sciences; information technology and applications; data and database management; clinical research methodologies; health information resources and systems; office management; legal requirements; and professional standards.
- 51.0707 Health Information/Medical Records Technology/Technician.** A program that prepares individuals, under the supervision of health information administrators and other professionals, to construct medical records and clinical databases, perform manipulations on retrieved data, control the security and quality of records, and supervise data entry and technical maintenance personnel. Includes instruction in clinical and biomedical science data and information requirements; database

management; data coding and validation; information security; quality control; health information content and structure; medical business procedures; and legal requirements.

- 51.0708** **Medical Transcription/Transcriptionist.** A program that prepares individuals to execute verbatim medical conference minutes, medical reports, and medical orders. Includes instruction in dictation and simultaneous recording, analysis of notes and visual evidence, medical terminology, data processing applications and skills, formal medical report and correspondence formats, professional standards, and applicable law and regulations.
- 51.0709** **Medical Office Computer Specialist/Assistant. (NEW)** A program that prepares individuals to apply computer programming, troubleshooting, and information technology skills to the installation, maintenance, and upgrade of standard, customized, or proprietary medical software and associated hardware. Includes instruction in computer programming, systems analysis, networking, telecommunications, medical records and informatics software applications, information technology, systems administration, computer security, and applicable regulations and certifications or licenses.
- 51.0710** **Medical Office Assistant/Specialist. (NEW)** A program that prepares individuals, under the supervision of office managers and other professionals, to perform routine administrative duties in a medical, clinical, or health care facility/system office environment. Includes instruction in general office skills, data processing, office equipment operation, principles of medical record-keeping and business regulations, medical/clinical office procedures, and communications skills.
- 51.0711** **Medical/Health Management and Clinical Assistant/Specialist. (NEW)** A program that prepares individuals, under the supervision of physicians, nurses, or other health care professionals, to perform medical office or facilities management services and perform one or more clinical allied health specialties. Includes instruction in health care management; medical office administration; medical law and regulations; training in one or more diagnostic, treatment, therapy, or laboratory specialties at the assistant level or above; and applicable professional standards and ethics.
- 51.0712** **Medical Reception/Receptionist. (NEW)** A program that prepares individuals, under the supervision of office managers, nurses, or physicians, to provide customer service, visitor reception, and patient intake and discharge services. Includes instruction in medical office and health care facility procedures, medical terminology, interpersonal skills, record-keeping, customer service, telephone skills, data entry, interpersonal communications skills, and applicable policies and regulations.
- 51.0713** **Medical Insurance Coding Specialist/Coder. (NEW)** A program that prepares individuals to perform specialized data entry, classification, and record-keeping procedures related to medical diagnostic, treatment, billing, and insurance documentation. Includes instruction in medical records and insurance software applications, basic anatomy and physiology, medical terminology, fundamentals of medical science and treatment procedures, data classification and coding, data entry skills, and regulations relating to Medicare and insurance documentation.

- 51.0714** **Medical Insurance Specialist/Medical Biller. (NEW)** A program that prepares individuals to perform and manage the medical and health insurance operations in a medical office, health care facility, health maintenance organization, or insurance provider. Includes instruction in health and medical insurance processes; health insurance law, policy, and regulations; insurance records and paperwork administration; insurance office administration; health/medical insurance software applications; personnel supervision; business mathematics; billing and collection procedures; medical terminology; and communications skills.
- 51.0715** **Health/Medical Claims Examiner. (NEW)** A program that prepares individuals to perform specialized investigatory, analytical, evaluative, and consultative functions related to health/medical insurance operations and their regulation. Includes instruction in health and medical insurance processes and procedures; health insurance law and regulations; health care industry law; record-keeping; analytic and investigatory techniques; evaluation methods; field operations methods; office procedures; related software applications; oral and written communications skills; interviewing techniques; and professional standards and ethics.
- 51.0716** **Medical Administrative/Executive Assistant and Medical Secretary.** A program that prepares individuals to perform the duties of special assistants and personal secretaries for practicing physicians and nurses, health care facilities and services administrators, and other health care professionals. Includes instruction in business and medical communications, medical terminology, principles of health care operations, public relations and interpersonal communications, software applications, record-keeping and filing systems, scheduling and meeting planning, applicable policy and regulations, and professional standards and ethics. *(Moved from 52.0404)*
- 51.0717** **Medical Staff Services Technology/Technician. (NEW)** A program that prepares individuals to perform credentialing, privileging, personnel management, and accreditation compliance services for hospitals and other health care facilities and organizations. Includes instruction in medical staff organization and management, medical terminology, credentialing and re-credentialing, health care accreditation and regulatory standards, health care law, meeting and negotiation management, and office information systems management.
- 51.0799** **Health and Medical Administrative Services, Other.** Any instructional program in health and medical administrative services not listed above.
- 51.08** **Allied Health and Medical Assisting Services.** Instructional content for this group of programs is defined in codes 51.0801– 51.0899.
- 51.0801** **Medical/Clinical Assistant.** A program that prepares individuals, under the supervision of physicians, to provide medical office administrative services and perform clinical duties including patient intake and care, routine diagnostic and recording procedures, pre-examination and examination assistance, and the administration of medications and first aid. Includes instruction in basic anatomy and physiology; medical terminology; medical law and ethics; patient psychology and communications; medical office procedures; and clinical diagnostic, examination, testing, and treatment procedures.

- 51.0802 Clinical/Medical Laboratory Assistant.** A program that prepares individuals, under the supervision of physicians or laboratory scientists or technologists, to perform waived testing procedures (Clinical Laboratory Improvement Amendments of 1988), phlebotomy, and other duties in support of laboratory teams. Includes instruction in clinical procedures, various laboratory tests, laboratory mathematics, computer technology, equipment operation and maintenance, sterilization and safety, communications skills, and interpersonal skills.
- 51.0803 Occupational Therapist Assistant.** A program that prepares individuals, under the supervision of occupational therapists, to direct patient participation in skill-enhancing, learning, and motivational tasks; correct or diminish pathologies; and to provide direct health education and promotion services. Includes instruction in human life span development, occupational therapy principles and practice skills, treatment planning and implementation, record-keeping and documentation, patient education and intervention, activity and program direction, and assistive services management.
- [51.0804] Ophthalmic Medical Assistant.** (Deleted, Report under 51.1803).
- 51.0805 Pharmacy Technician/Assistant.** A program that prepares individuals, under the supervision of pharmacists, to prepare medications, provide medications and related assistance to patients, and manage pharmacy clinical and business operations. Includes instruction in medical and pharmaceutical terminology; principles of pharmacology and pharmaceuticals; drug identification; pharmacy laboratory procedures; prescription interpretation; patient communication and education; safety procedures; record-keeping; measurement and testing techniques; pharmacy business operations; prescription preparation; logistics and dispensing operations; and applicable standards and regulations.
- 51.0806 Physical Therapist Assistant.** A program that prepares individuals, under the supervision of a physical therapist, to implement physical therapy treatment care plans, train patients, conduct treatment interventions, use equipment, and observe and record patient progress. Includes instruction in applied anatomy and physiology, applied kinesiology, principles and procedures of physical therapy, basic neurology and orthopedics, physical therapy modalities, documentation skills, psychosocial aspects of health care, wound and injury care, electrotherapy, working with orthotics and prostheses, and personal and professional ethics.
- (51.0807) Physician Assistant.** (Moved, Report under 51.0912)
- 51.0808 Veterinary/Animal Health Technology/Technician and Veterinary Assistant.** A program that prepares individuals, under the supervision of veterinarians, laboratory animal specialists, and zoological professionals, to provide patient management, care, and clinical procedures assistance as well as owner communication. Includes instruction in animal nursing care, animal health and nutrition, animal handling, clinical pathology, radiology, anesthesiology, dental prophylaxis, surgical assisting, clinical laboratory procedures, office administration skills, patient and owner management, and applicable standards and regulations.
- 51.0809 Anesthesiologist Assistant. (NEW)** A program that prepares individuals to assist anesthesiologists and nurse anesthetists in

developing and implementing patient anesthesia care plans, including preoperative, surgical theater, recovery room, and postoperative/intensive care procedures. Includes instruction in patient data collection, catheter insertion, airway management and drug administration, assisting the administration and monitoring of regional and peripheral nerve blockades, support therapy, adjusting anesthetic levels during surgery, interoperative monitoring, postoperative procedures, pain clinics and patient education, and administrative tasks.

51.0810 ***Emergency Care Attendant (EMT Ambulance). (NEW)*** A program that prepares individuals to assist licensed EMTs, under the supervision of a physician, to prepare and transport ill or injured patients, and to operate emergency vehicles and equipment such as life support units. Includes instruction in first aid and emergency medicine field techniques; patient stabilization and care; medical field communications; equipment operation and maintenance; emergency vehicle operation; and applicable standards and regulations.

51.0811 ***Pathology/Pathologist Assistant. (NEW)*** A program that prepares individuals, under the supervision of pathologists, to assist in the performance of autopsies, obtaining and preparing surgical specimens, preparing autopsy reports, and interacting with other clinicians, officials, and individuals. Includes instruction in anatomy; physiology; medical terminology; general, systemic, forensic, and pediatric pathology; autopsy procedures; surgical technique; medical photography; tissue preparation; record keeping and laboratory administration; interpersonal skills; and applicable standards and regulations.

51.0812 ***Respiratory Therapy Technician/Assistant. (NEW)*** A program that prepares individuals to administer general respiratory care procedures under the supervision of respiratory therapists in a variety of clinical settings. Includes instruction in patient data collection and monitoring, airway management, installation of nebulizers and other respiratory assistance devices, application and monitoring of breathing gases, equipment operation and maintenance, safety and sanitation procedures, and applicable regulations.

51.0813 ***Chiropractic Assistant/Technician. (NEW)*** A program that prepares individuals, under the supervision of a chiropractor, to provide patient management, examination, and treatment services. Includes instruction in the principles and procedures of chiropractic; radiographic X-Ray procedures and techniques; X-Ray film analysis and media studies; orthopedic and neurological testing; clinical laboratory procedures; patient management and education; office administrative skills; and applicable law and regulations.

51.0899 ***Allied Health and Medical Assisting Services, Other.*** Any instructional program in allied health and medical assisting services not listed above.

51.09 ***Allied Health Diagnostic, Intervention, and Treatment Professions.*** Instructional content for this group of programs is defined in codes 51.0901 – 51.0999.

51.0901 ***Cardiovascular Technology/Technologist.*** A program that prepares individuals to perform invasive, noninvasive, and peripheral examinations of the cardiovascular system at the request of physicians

to aid in diagnoses and therapeutic treatments. Includes instruction in reviewing and recording patient histories and clinical data; patient care; investigative and examination procedures; diagnostic procedures; data analysis and documentation; physician consultation; equipment operation and monitoring; and professional standards and ethics.

51.0902 Electrocardiograph Technology/Technician. A program that prepares individuals, under the supervision of physicians and nurses, to administer EKG and ECG diagnostic examinations and report results to the treatment team. Includes instruction in basic anatomy and physiology, the cardiovascular system, medical terminology, cardiovascular medications and effects, patient care, EKG and ECG administration, equipment operation and maintenance, interpretation of cardiac rhythm, patient record management, and professional standards and ethics.

51.0903 Electroneurodiagnostic/Electroencephalographic Technology/Technologist. A program that prepares individuals, under the supervision of a physician, to study and record electrical activity in the brain and nervous system for purposes of patient monitoring and supporting diagnoses. Includes instruction in patient communication and care; taking and abstracting patient histories; application of recording electrodes; EEG, EP, and PSG equipment operation and procedural techniques; and data recording and documentation.

51.0904 Emergency Medical Technology/Technician (EMT Paramedic). A program that prepares individuals, under the remote supervision of physicians, to recognize, assess, and manage medical emergencies in prehospital settings and to supervise Ambulance personnel. Includes instruction in basic, intermediate, and advanced EMT procedures; emergency surgical procedures; medical triage; rescue operations; crisis scene management and personnel supervision; equipment operation and maintenance; patient stabilization, monitoring, and care; drug administration; identification and preliminary diagnosis of diseases and injuries; communication and computer operations; basic anatomy, physiology, pathology, and toxicology; and professional standards and regulations.

Emergency Care Attendant (EMT Ambulance). (Report under 51.0810)

51.0905 Nuclear Medical Technology/Technologist. A program that prepares individuals, under the supervision of physicians, to employ radioactive and stable nuclides in diagnostic evaluations and therapeutic applications while monitoring for patient health and safety. Includes instruction in nuclear physics, health physics, instrumentation and statistics, biochemistry, immunology, radiopharmacology, radiation biology, clinical nuclear medicine, radionuclide therapy, computer applications, safety regulations, equipment operation, quality control, laboratory procedures, taking patient histories, patient evaluation and monitoring, emergency first aid, administration and record-keeping, and personnel supervision.

51.0906 Perfusion Technology/Perfusionist. A program that prepares individuals, under the supervision of physicians and nurses, to operate extracorporeal circulation and autotransfusion equipment during medical procedures and surgeries where the support or temporary replacement of a patient's own respiratory or circulatory system is required. Includes

instruction in equipment selection and operation; physician and medical team consultation; patient condition monitoring; procedural techniques; and principles of respiratory and circulatory physiology.

- 51.0907 Medical Radiologic Technology/Science – Radiation Therapist.** A program that prepares individuals to administer prescribed courses of radiation treatment, manage patients undergoing radiation therapy, and maintain pertinent records. Includes instruction in applied anatomy and physiology, oncologic pathology, radiation biology, radiation oncology procedures and techniques, radiation dosimetry, tumor localization, treatment planning, patient communication and management, data collection, record-keeping, and applicable standards and regulations.
- 51.0908 Respiratory Care Therapy/Therapist.** A program that prepares individuals, under the supervision of physicians, to assist in developing respiratory care plans, administer respiratory care procedures, supervise personnel and equipment operation, maintain records, and consult with other health care team members. Includes instruction in the applied basic biomedical sciences; anatomy, physiology, and pathology of the respiratory system; clinical medicine; therapeutic procedures; clinical expressions; data collection and record-keeping; patient communication; equipment operation and maintenance; personnel supervision; and procedures for special population groups.
- **Respiratory Therapy Technician/Assistant.** (Report under 51.0812)
- 51.0909 Surgical Technology/Technologist.** A program that prepares individuals, under the supervision of physicians and surgical nurses, to maintain, monitor, and enforce the sterile field and adherence to aseptic technique by preoperative, surgical team, and postoperative personnel. Includes instruction in instrument and equipment sterilization and handling; surgical supplies management; wound exposure and closure; surgical computer and robot operation and monitoring; maintenance of hemostasis; and patient and team scrubbing.
- **Anesthesiologist Assistant.** (Report under 51.0809)
- 51.0910 Diagnostic Medical Sonography/Sonographer and Ultrasound Technician.** A program that prepares individuals, under the supervision of physicians, to utilize medical ultrasound techniques to gather sonographic data used to diagnose a variety of conditions and diseases. Includes instruction in obtaining, reviewing, and integrating patient histories and data; patient instruction and care; anatomic, physiologic and pathologic data recording; sonographic data processing; sonography equipment operation; and professional standards and ethics.
- 51.0911 Radiologic Technology/Science – Radiographer. (NEW)** A program that prepares individuals, under the supervision of physicians, to provide medical imaging services to patients and attending health care professionals. Includes instruction in applied anatomy and physiology, patient positioning, radiographic technique, radiation biology, safety and emergency procedures, equipment operation and maintenance, quality assurance, patient education, and medical imaging/radiologic services management.
- 51.0912 Physician Assistant.** A program that prepares individuals to practice medicine, including diagnoses and treatment therapies, under the supervision of a physician. Includes instruction in the basic medical and

clinical sciences and specialized preparation in fields such as family medicine; pediatrics; obstetrics; gynecology; general surgery; psychiatry; behavioral medicine; the delivery of health care services to homebound patients, rural populations, underserved populations; and community health services. (*Moved from 51.0807*)

Medical/Clinical Assistant. (Report under 51.0801)

51.0913 Athletic Training/Trainer. A program that prepares individuals to work in consultation with, and under the supervision of physicians to prevent and treat sports injuries and associated conditions. Includes instruction in the identification, evaluation, and treatment of athletic injuries and illnesses; first aid and emergency care; therapeutic exercise; anatomy and physiology; exercise physiology; kinesiology and biomechanics; nutrition; sports psychology; personal and community health; knowledge of various sports and their biomechanical and physiological demands; and applicable professional standards and regulations.
(*Moved from 31.0503*)

51.0914 Gene/Genetic Therapy. (NEW) A program that focuses on the application of genetics to the therapeutic treatment of diseases and inherited abnormalities through the targeted modification of gene expression, and prepares individuals to administer genetic therapies. Includes instruction in medical genetics, genome analysis, pharmacology of gene transfer, viral vectors, nonviral therapeutic techniques, genetic screening, targeted gene delivery, vector production, safety and quality assurance, clinical trials management, and bioethics.

Genetic Counseling/Counselor. (Report under 51.1509)

51.0915 Cardiopulmonary Technology/Technologist. (NEW) A program that prepares individuals, under the supervision of physicians and nurses, to perform both cardiovascular and pulmonary diagnostic and therapeutic procedures. Includes instruction in cardiopulmonary pharmacology; anatomy and physiology of the heart, peripheral vascular system, and lungs; pulmonary and cardiovascular disease and dysfunction; peripheral vascular Doppler procedures; invasive and non-invasive cardiology; pulmonary function tests; blood gas analysis; echocardiograph procedures; bronchoscopy; patient management; patient history taking and record-keeping; applications to clinical research; and emergency procedures.

51.0916 Radiation Protection/Health Physics Technician. (NEW) A program that prepares individuals, under the supervision of health physicists, occupational safety and health specialists, and public health officials, to monitor and control radiation exposure and implement preventive measures in health care, work, and natural environments. Includes instruction in radiation physics, environmental radioactivity, radiological instrumentation, electronics of radiation detection equipment, radioactive waste management and control, safety and handling procedures, decontamination procedures, radioactivity testing and analysis, and communications skills.

51.0999 Allied Health Diagnostic, Intervention, and Treatment Professions, Other. Any instructional program in allied health diagnostic, intervention, and treatment professions not listed above.

51.10 Clinical/Medical Laboratory Science and Allied Professions. Instructional content for this group of programs is defined in codes 51.1001– 51.1099.

51.1001 Blood Bank Technology Specialist. A program that prepares individuals to perform routine and specialized blood testing procedures, collect and process blood donations, and support physicians and other clinicians administering transfusion therapy. Includes instruction in basic cellular biology, immunohematology, blood bank procedures, blood typing, antigen and antibody identification tests, hemolytic and transfusion responses and diseases, donor selection, blood drawing and storage, blood separation, viral marker testing, laboratory and personnel supervision, safety and sterilization, and applicable laws and regulations.

51.1002 Cytotechnology/Cytotechnologist. A program that prepares individuals to work with pathologists to detect changes in body cells that may indicate, and permit diagnosis of, the early development of cancers and other diseases. Includes instruction in biochemistry, microbiology, applied mathematics, microscopy, slide preparation, identification of cellular structures and abnormalities, and laboratory procedures and safety.

51.1003 Hematology Technology/Technician. A program that prepares individuals, under the supervision of clinical laboratory scientists and health care professionals, to perform tests and analyses of blood samples. Includes instruction in clinical laboratory procedures; blood anatomy and physiology; cellular and molecular biology; blood pathology and disease indicators; quantitative, qualitative, and coagulation testing methodologies; equipment operation and maintenance; and record-keeping.

51.1004 Clinical/Medical Laboratory Technician. A program that prepares individuals, under the supervision of clinical laboratory scientists/medical technologists, to perform routine medical laboratory procedures and tests and to apply preset strategies to record and analyze data. Includes instruction in general laboratory procedures and skills; laboratory mathematics; medical computer applications; interpersonal and communications skills; and the basic principles of hematology; medical microbiology; immunohematology; immunology; clinical chemistry, and urinalysis.

----- **Clinical/Medical Laboratory Assistant.** (Report under 51.0802)

51.1005 Clinical Laboratory Science/Medical Technology/Technologist. A program that prepares individuals to conduct and supervise complex medical tests, clinical trials, and research experiments; manage clinical laboratories; and consult with physicians and clinical researchers on diagnoses, disease causation and spread, and research outcomes. Includes instruction in the theory and practice of hematology; clinical chemistry; microbiology; immunology; immunohematology; physiological relationships to test results; laboratory procedures and quality assurance controls; test and research design and implementation; analytic techniques; laboratory management and personnel supervision; data development and reporting; medical informatics; and professional standards and regulations.

- 51.1006** **Ophthalmic Laboratory Technology/Technician.** A program that prepares individuals, under the supervision of ophthalmologists and optometrists, to cut, grind, edge, and finish corrective lenses and to fabricate eyewear. Includes instruction in optical theory, applied mathematics, lense surfacing and finishing, tinting and coating, impact resistance treatment and testing, frame construction and repair, prescription interpretation, equipment operation and maintenance, follow-up adjustment, record-keeping, and laboratory safety procedures.
- 51.1007** **Histologic Technology/Histotechnologist. (NEW)** A program that prepares individuals, at the request of physicians, researchers, and laboratory scientists, to identify tissue structures and cell components and relate these findings to physiological functions and to the detection and diagnosis of diseases and other abnormalities. Includes instruction in medical chemistry; histochemistry; biochemistry; anatomy; physiology; medical informatics; applied mathematics; electron microscopy; instrumentation; quality control procedures; data recording and analysis; laboratory administration; medical terminology; and professional standards and ethics.
- **Pathology/Pathologist Assistant.** (Report under 51.0811)
- 51.1008** **Histologic Technician. (NEW)** A program that prepares individuals, under the supervision of histotechnologists and other clinical laboratory scientists, to prepare and process tissue samples and perform routine histologic procedures and tests. Includes instruction in fixation, dehydration, embedding, sectioning, decalcification, microincineration, mounting, routine and special steaming, laboratory mathematics, laboratory procedures and safety, instrumentation and microscopy, computer applications, preparation of museum specimens, and recording and administrative procedures.
- 51.1009** **Phlebotomy/Phlebotomist. (NEW)** A program that prepares individuals, under the supervision of physicians and other health care professionals, to draw blood samples from patients using a variety of intrusive procedures. Includes instruction in basic vascular anatomy and physiology, blood physiology, skin puncture techniques, venipuncture, venous specimen collection and handling, safety and sanitation procedures, and applicable standards and regulations.
- 51.1010** **Cytogenetics/Genetics/Clinical Genetics Technology/Technologist. (NEW)** A program that prepares individuals to perform analyses of the human genome and chromosomes for the research and diagnosis of genetic diseases and defects, in preparation for organ transplants, and in support of treatments for cancers and leukemias. Includes instruction in chromosome analysis, fluorescent in situ hybridization (FISH), molecular genetic techniques, cytotechnology, and photomicrography.
- 51.1011** **Renal/Dialysis Technologist/Technician. (NEW)** A program that prepares individuals to administer hemodialysis treatments to patients with renal failure under the supervision of a nurse or physician. Includes instruction in basic anatomy and physiology, dialysis prescription interpretation, dialysite preparation, extracorporeal circuit and dialyzer set-up and maintenance, equipment monitoring, patient preparation, taking vital signs, documentation and communication, venipuncture and local anesthesia administration, emergency intervention, safety and sanitation, and professional standards and ethics.

51.1099 Clinical/Medical Laboratory Science and Allied Professions, Other. Any instructional program in clinical/medical laboratory science and allied professions not listed above.

51.11 Health/Medical Preparatory Programs. Instructional content for this group of programs is defined in codes 51.1101 – 51.1199.

51.1101 Pre-Dentistry Studies. A program that prepares individuals for admission to a first-professional program in dentistry.

51.1102 Pre-Medicine/Pre-Medical Studies. A program that prepares individuals for admission to a first-professional program in medicine, osteopathic medicine, or podiatric medicine.

51.1103 Pre-Pharmacy Studies. A program that prepares individuals for admission to a first-professional program in pharmacy.

51.1104 Pre-Veterinary Studies. A program that prepares individuals for admission to a first-professional program in veterinary medicine.

51.1105 Pre-Nursing Studies. (NEW) A program that prepares individuals for admission to a professional program in Nursing.

51.1199 Health/Medical Preparatory Programs, Other. Any instructional program in health and medical first-professional preparation not listed above.

51.12 Medicine (MD). Instructional content is defined in code 51.1201.

51.1201 Medicine (MD). A program that prepares individuals for the independent professional practice of medicine, involving the prevention, diagnosis, and treatment of illnesses, injuries, and other disorders of the human body. Includes instruction in the basic medical sciences, clinical medicine, examination and diagnosis, patient communications, medical ethics and law, professional standards, and rotations in specialties such as internal medicine, surgery, pediatrics, obstetrics and gynecology, orthopedics, neurology, ophthalmology, radiology, clinical pathology, anesthesiology, family medicine, and psychiatry.

[51.13] Medical Basic Sciences. (Deleted, Report under 26. Series). All of the instructional programs in this series have been integrated into programs in Series 26.)

(51.1301) Medical Anatomy. (Report under 26.0403)

(51.1302) Medical Biochemistry. (Report under 26.0202)

(51.1303) Medical Biomathematics and Biometrics. (Report under 26.1101)

(51.1304) Medical Biophysics. (Report under 26.0203)

(51.1305) Medical Cell Biology. (Report under 26.0401)

(51.1306) Medical Genetics. (Report under 26.0806)

- (51.1307) **Medical Immunology.** (Report under 26.0507)
- (51.1308) **Medical Microbiology.** (Report under 26.0503)
- (51.1309) **Medical Molecular Biology.** (Report under 26.0204)
- (51.1310) **Medical Neurobiology.** (Report under 26.0906)
- (51.1311) **Medical Nutrition.** (Report under 30.1901)
- (51.1312) **Medical Pathology.** (Report under 26.0910)
- (51.1313) **Medical Physiology.** (Report under 26.09 Series)
- (51.1314) **Medical Toxicology.** (Report under 26.1004)
- (51.1399) **Medical Basic Sciences, Other.** (Report under 26.9999)

51.14 Medical Clinical Sciences/Graduate Medical Studies. Instructional content is defined in code 51.1401. **Note** ➔ *Program completions in specific biomedical science fields should be reported under Series 26. Medical education residencies should be reported under Series 60.02 in chapter II.*

51.1401 Medical Scientist (MS, PhD). An undifferentiated clinical science program that prepares graduated physicians (MD or DO) as research scientists in various areas.

51.15 Mental and Social Health Services and Allied Professions. Instructional content for this group of programs is defined in codes 51.1501 - 51.1599.

51.1501 Substance Abuse/Addiction Counseling. A program that prepares individuals to help prevent substance abuse, counsel individuals and families with drug and alcohol problems, and perform intervention and therapeutic services for persons suffering from addiction. Includes instruction in individual and group counseling skills, psychology of addiction, sociology, crisis intervention, substance abuse identification methodologies, substance abuse treatment modalities, substance abuse prevention and treatment resources, pharmacology and behavioral aspects of abused substances, treatment evaluation, patient observation and education, group dynamics, professional standards and ethics, and applicable law and regulations.

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

- 51.1503 Clinical/Medical Social Work.** A program that prepares individuals for the specialized professional practice of social work, in collaboration with other health care professionals, in hospitals and other health care facilities and organizations. Includes instruction in social work, psychiatric case work, clinical interviewing techniques, therapeutic intervention strategies, patient testing and evaluation, patient and family counseling, social rehabilitation, patient care planning, record-keeping, and support services liaison.
- **Social Work.** (Report under 44.0701)
- 51.1504 Community Health Services/Liaison/Counseling.** A program that prepares individuals to serve as facilitators, advocates, and referral professionals linking health care and related social services with affected recipient communities. Includes instruction in public and community health, human and social services, health services administration, group counseling, health education, group advocacy, cross-cultural and multilingual communication, and applicable laws and policies.
(Moved from 51.0301)
- **Community Organization and Advocacy.** (Report under 44.0201)
- 51.1505 Marriage and Family Therapy/Counseling.** A program that prepares individuals for the independent professional practice of marriage and family therapy, involving the diagnosis of cognitive, affective, and behavioral domain disorders, both mental and emotional, within the context of marriage and family systems and the application of short- and long-term therapeutic strategies in family group contexts. Includes instruction in psychotherapy, family systems and studies, small group intervention and therapy, marital problems, depression, identification of psychopathologies and behavioral disorders, holistic health care, practice management, applicable regulations, and professional standards and ethics. *(Moved from 19.0703)*
- **Family Psychology.** (Report under 42.2501)
- **Family Systems.** (Report under 19.0704)
- 51.1506 Clinical Pastoral Counseling/Patient Counseling. (NEW)** A program that prepares ordained clergy and other counseling professionals to respond to the emotional and spiritual needs of patients and families in health care emergencies and other situations, and to consult with and counsel other health care professionals. Includes instruction in advanced interpersonal communication; individual and small group counseling; interdisciplinary teamwork; crisis management; extended care relationships; self-analysis; medical ethics; pastoral care art; spiritual dimensions of human growth and health; counseling psychology and therapy; and applications to grief, death, emotional collapse, injury, individual/family adjustment, and chronic illness situations.
- **Pastoral Studies/Counseling.** (Report under 39.0701)
- 51.1507 Psychoanalysis and Psychotherapy.** A program that prepares individuals to practice the provision of psychoanalytic counseling to individuals and groups based on the psychodynamic principles evolved from authorities such as Freud, Adler, and Jung. Includes instruction in

self-analysis, personality theory, dream analysis, free association and transference theory and techniques, psychodynamic theory, developmental processes, applications to specific clinical conditions, practice management, and professional standards and ethics.
(Moved from 51.2705)

51.1508 **Mental Health Counseling/Counselor. (NEW)** A program that prepares individuals to provide evaluations, referrals, and short-term counseling services to help people prevent or remediate personal problems, conflicts, and emotional crises. Includes instruction in human development, psychopathology, individual and group counseling, personality theory, career assessment, patient screening and referral, observation and testing techniques, interviewing skills, professional standards and ethics, and applicable laws and regulations.

51.1509 **Genetic Counseling/Counselor. (NEW)** A program that prepares individuals to counsel patients and families concerning inherited genetic disorders and diseases, children with birth defects; assess risk factors and planning options associated with potential and actual inherited conditions; and serve as patient advocates and provide referral services in relation to private and public support services. Includes instruction in clinical/medical genetics, methods of genetic testing, interviewing and counseling skills, genetic and support services delivery, principles of public health, medical ethics, law and regulations, patient advocacy, and professional standards.

51.1599 **Mental and Social Health Services and Allied Professions, Other.** Any instructional program in mental and social health services and allied professions not listed above.

51.16 **Nursing.** Instructional content for this group of programs is defined in codes 51.1601-51.1699.

51.1601 **Nursing/Registered Nurse (RN, ASN, BSN, MSN).** A program that generally prepares individuals in the knowledge, techniques and procedures for promoting health, providing care for sick, disabled, injured, or other individuals or groups. Includes instruction in the administration of medication and treatments, assisting a physician during treatments and examinations, Referring patients to physicians and other health care specialists, and planning education for health maintenance.

51.1602 **Nursing Administration (MSN, MS, PhD).** A program that prepares registered nurses (RNs) to manage Nursing personnel and services in hospitals and other health care delivery agencies. Includes instruction in principles of health care administration, resource and financial management, health care law and policy, medical personnel management, and managed care operations.

51.1603 **Adult Health Nurse/Nursing.** A program that prepares registered nurses (RNs) to provide general care for adult patients. Includes instruction in adult primary care, adult pathophysiology, clinical management of medication and treatments, patient assessment and education, patient referral, and planning adult health maintenance programs.

51.1604 **Nurse Anesthetist.** A program that prepares registered nurses (RNs) to administer anesthetics and provide care for patients before, during and

after anesthesia. Includes instruction in the biochemistry and physics of anesthesia; advanced anatomy and physiology; clinical pharmacology of anesthetics and adjunctive drugs; pain management; acute care and operating room practice; clinical technology and procedures; emergency intervention; patient assessment and education; and legal issues.

- **Anesthesiologist Assistant.** (Report under 51.0809)
- 51.1605 Family Practice Nurse/Nurse Practitioner.** A program that prepares registered nurses (RNs) to provide independent general care for family groups and individuals in the context of family living. Includes instruction in family theory and intervention, role synthesis, family primary care, nursing practice and health care policy, holistic practice, pediatric practice, gerontological practice, health assessment, clinical pharmacotherapeutics, clinical techniques, and pathopsychology.
- 51.1606 Maternal/Child Health and Neonatal Nurse/Nursing.** A program that prepares registered nurses (RNs) to provide prenatal care to pregnant women and to mothers and their newborn infants. Includes instruction in perinatal and newborn health assessment, stabilization, and care; pathophysiology of pregnancy, fetuses, and the newborn; clinical management of high-risk pregnancies and newborns; perinatal and neonatal technology and clinical procedures; and patient education.
- 51.1607 Nurse Midwife/Nursing Midwifery.** A program that prepares registered nurses (RNs) to independently deliver babies and treat mothers in the prenatal, delivery, and post-delivery periods. Includes instruction in pre-delivery screening, physician referral, and the care of infants during the delivery and immediate post-delivery phases.
- 51.1608 Nursing Science (MS, PhD).** A research program that focuses on the study of advanced clinical practices, research methodologies, the administration of complex nursing services, and that prepares nurses to further the progress of nursing research through experimentation and clinical applications.
- 51.1609 Pediatric Nurse/Nursing.** A program that prepares registered nurses (RNs) to provide care for children from infancy through adolescence. Includes instruction in the administration of medication and treatments, assisting physicians, patient examination and referral, and planning and delivering health maintenance and health education programs.
- 51.1610 Psychiatric/Mental Health Nurse/Nursing.** A program that prepares registered nurses (RNs) to promote mental health and provide nursing care to patients with mental, emotional or behavioral disorders, in mental institutions or other settings. Includes instruction in psychopathology, behavioral health, counseling and intervention strategies, psychoeducation, mental health assessment and dual diagnosis, stabilization and management of psychotic illness, psychiatric care and rehabilitation, substance abuse, and crisis intervention.
- 51.1611 Public Health/Community Nurse/Nursing.** A program that prepares registered nurses (RNs) to promote health and provide preventive and curative nursing services for groups or communities under the supervision of a public health agency. Includes instruction in community and rural health, family therapy and intervention, disease prevention, health education, and community health assessment.

- 51.1612** **Perioperative/Operating Room and Surgical Nurse/Nursing.** A program that prepares registered nurses (RNs) to provide care to patients before and during surgery, and provide tableside assistance to surgeons. Includes instruction in operating room safety and preparation, aseptic technique, anesthesia, patient preparation, surgical instruments and procedures, sterilization and disinfecting, surgical drugs and solutions, hemostasis, emergency procedures, and patient/family education.
- 51.1613** **Licensed Practical/Vocational Nurse Training (LPN, LVN, Cert., Dipl, AAS).** A program that prepares individuals to assist in providing general nursing care under the direction of a registered nurse, physician or dentist. Includes instruction in taking patient vital signs, applying sterile dressings, patient health education and assistance with examinations and treatment.
- 51.1614** **Nurse/Nursing Assistant/Aide and Patient Care Assistant.** A program that prepares individuals to perform routine nursing-related services to patients in hospitals or long-term care facilities, under the training and supervision of a registered nurse or licensed practical nurse.
- (51.1615)** **Home Health Aide.** (Moved, Report under 51.2602)
- 51.1616** **Clinical Nurse Specialist. (NEW)** A program that prepares registered nurses to deliver direct patient and client care in clinical settings. Includes instruction in clinical pharmacotherapeutics, advanced clinical practice, holistic nursing, nursing practice and health care policy, administration and consultation services, health assessment, patient stabilization and care, and patient education.
- 51.1617** **Critical Care Nursing. (NEW)** A program that prepares registered nurses to provide specialized care to patients with life-threatening problems, including those in intensive care facilities and on life support. Includes instruction in adult, neonatal, and pediatric critical care; technical skills; patient monitoring and assessment; normal and abnormal readings; and troubleshooting.
- 51.1618** **Occupational and Environmental Health Nursing. (NEW)** A program that prepares registered nurses to deliver nursing health care services to workers and worker populations in clinical settings and at job sites. Includes instruction in public and community health; occupational safety and health; occupational health surveillance; case management; fitness for duty testing; medication; allergies and immunization; emergency and ambulatory care; and applicable laws and regulations.
- 51.1699** **Nursing, Other.** Any instructional program in nursing not listed above.
- 51.17** **Optometry (OD).** Instructional content is defined in code 51.1701.
- 51.1701** **Optometry (OD).** A program that prepares individuals for the independent professional practice of optometry and that focuses on the principles and techniques for examining, diagnosing and treating conditions of the visual system. Includes instruction in prescribing glasses and contact lenses, other optical aids, corrective therapies, patient counseling, physician referral, practice management, and ethics and professional standards.

- 51.18 Ophthalmic and Optometric Support Services and Allied Professions.** Instructional content for this group of programs is defined in codes 51.1801– 51.1899.
- 51.1801 Opticianry/Ophthalmic Dispensing Optician.** A program that prepares individuals to adapt and fit corrective eyewear, including eyeglasses and contact lenses, as prescribed by ophthalmologists or optometrists; to assist patients in selecting appropriate frames; and to prepare work orders for ophthalmic laboratory technicians. Includes instruction in geometrical optics; ophthalmic optics; anatomy of the eye; optical instrumentation; use and maintenance of adjustment and cleaning tools; prescription interpretation; contact lens adaptation and fitting; prosthesis fitting; facial and eye measuring; pathology identification; record-keeping; and patient and business administrative tasks.
- 51.1802 Optometric Technician/Assistant.** A program that prepares individuals to assist optometrists in providing patient care, administering examinations and treatments, and performing office administrative functions. Includes instruction in applied anatomy and physiology of the eye, visual testing, patient communication, patient preparation, medications and administration, dispensing and fitting of eyeglasses and contact lenses, record-keeping, and office management skills.
- 51.1803 Ophthalmic Technician/Technologist.** A program that prepares individuals to assist ophthalmologists and optometrists in examining and treating patients with vision problems, vision disorders, and eye diseases. Includes instruction in taking patient histories; administering directed treatments and topical medications; diagnostic test procedures and equipment operation; anatomical and functional ocular measurements; patient care and instruction; ophthalmic and surgical equipment maintenance; safety and sterilization procedures; and office administrative procedures.
- 51.1804 Orthoptics/Orthoptist.** A program that prepares individuals, under the supervision of ophthalmologists, to analyze, evaluate, and treat specific disorders of vision, eye movement, and eye alignment in children and adults. Includes instruction in eye anatomy, neuroanatomy, physiology, pharmacology, ophthalmic optics, diagnostic testing and measurement, orthoptic treatment therapy, systemic ocular diseases and disorders, principles of surgery, examination techniques, patient education, child psychology and development, learning disabilities, medical writing, and record-keeping.
- 51.1899 Ophthalmic and Optometric Support Services and Allied Professions, Other.** Any instructional program in ophthalmic and optometric support services and allied professions not listed above.
- 51.19 Osteopathic Medicine/Osteopathy (DO).** Instructional content is defined in code 51.1901.
- 51.1901 Osteopathic Medicine/Osteopathy (DO).** A program that prepares individuals for the independent professional practice of osteopathic medicine, involving a combination of medical principles and procedures and osteopathic principles of holistic medicine and the relationship of the musculoskeletal system to general health. Includes instruction in the basic medical sciences, preventive medicine, family and community medicine, medical informatics, disease systems, organ and physiologic

systems, osteopathic principles and practice, osteopathic manipulative treatment, musculoskeletal and skin systems, clinical specialty rotations, medical ethics, and professional standards and practice management.

51.20 Pharmacy, Pharmaceutical Sciences, and Administration. Instructional content for this group of programs is defined in codes 51.2001 – 51.2099.

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

Pharmacy Technician/Assistant. (Report under 51.0805)

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

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

51.2004 Medicinal and Pharmaceutical Chemistry (MS, PhD). A program that focuses on the application of chemistry to the study of biologically and clinically active substances, biological and pharmacological interactions, and the development of associated research methods, techniques, and clinical trial procedures. Includes instruction in organic chemistry, biochemistry, molecular graphics, rational drug design, toxicology, molecular biology, pharmacology, enzyme mechanisms, receptor theory, neurochemistry, drug metabolism, drug synthesis, biological mechanisms of drug action, research tools and techniques, and laboratory safety.
(Moved from 40.0505)

51.2005 Natural Products Chemistry and Pharmacognosy (MS, PhD). (NEW) A program that focuses on the scientific study of biologically active compounds found in naturally occurring sources such as plants, animals, and microbes and their use and/or modification as medicinal substances.

Includes instruction in medicinal chemistry, organic medicinals, pharmacological therapeutics, pharmacokinetics, molecular biology, structural chemistry, enzymes, nucleic acids, economic botany, ethnobotany, bioprospecting, bioassay, compound identification and isolation, mass spectrometry, and analytical instrumentation and techniques.

- 51.2006** ***Clinical and Industrial Drug Development (MS, PhD). (NEW)***
A program that focuses on the scientific application of pharmacology, pharmaceuticals, and industrial management to the development, production, marketing, and distribution of pharmaceutical products. Includes instruction in industrial microbiology, plasmids, expression vectors, protein chemistry, assay and evaluation, drug synthesis and purification, quality control, industrial management, production security, patent procedures, intellectual property regulations and issues, patent enforcement and defense, and research design and testing.
- 51.2007** ***Pharmacoeconomics/Pharmaceutical Economics (MS, PhD). (NEW)***
A program that focuses on the application of economics and policy analysis to the study of the relationship of pharmacy services and pharmaceutical processes and products to the health care system and their impact on health care organizations. Includes instruction in health economics, pharmacoeconomics, health care systems, health care organization and management, statistics and biostatistics, outcomes research, health care policy, pharmacy services, and pharmaceutical industry operations.
- 51.2008** ***Clinical, Hospital, and Managed Care Pharmacy (MS, PhD). (NEW)***
A program that prepares individuals to deliver specialized pharmacy services and produce pharmaceutical products in clinical settings in conjunction with other health care professionals. Includes instruction in biostatistics; clinical pharmacokinetics; biopharmaceutics; neuropharmacology; pharmacodynamics; drug metabolism; clinical sampling and research design; drug delivery systems; chemotherapy; pharmacotherapy; clinical pharmacy management; medical and research ethics; and applications to nuclear, nutrition support, oncology, psychiatric, and therapeutic pharmacy.
- 51.2009** ***Industrial and Physical Pharmacy and Cosmetic Sciences (MS, PhD). (NEW)*** A program that focuses on the application of pharmaceutical sciences and pharmacy to the study of pharmaceuticals production and distribution, and prepares individuals to manage pharmaceutical industry operations. Includes instruction in pharmacoeconomics, industrial management, operations management, preformulation evaluation, product formulation/reformulation, drug product development, stability testing, dosage design, pilot scale-up, drug marketing, quality control, drug information, and legal and regulatory affairs.
- 51.2099** ***Pharmacy, Pharmaceutical Sciences, and Administration, Other.***
Any instructional program in pharmacy, pharmaceutical sciences, and administration not listed above.

51.21 Podiatric Medicine/Podiatry (DPM). Instructional content is defined in code 51.2101.

51.2101 Podiatric Medicine/Podiatry (DPM). A program that prepares individuals for the independent professional practice of podiatric medicine, involving the prevention, diagnosis, and treatment of diseases, disorders, and injuries to the foot and lower extremities. Includes instruction in the basic medical sciences; anatomy of the lower extremity; functional orthopedics; foot biomechanics; podiatric radiology; dermatology; podiatric surgery; podopediatrics; sports medicine; physical diagnosis; emergency medicine and traumatology; practice management; and professional standards and ethics.

51.22 Public Health. Instructional content for this group of programs is defined in codes 51.2201 – 51.2299.

51.2201 Public Health, General (MPH, DPH). A program that generally prepares individuals to plan, manage, and evaluate public health care services and to function as public health officers. Includes instruction in epidemiology, biostatistics, public health principles, preventive medicine, health policy and regulations, health care services and related administrative functions, public health law enforcement, health economics and budgeting, public communications, and professional standards and ethics.

Dental Public Health and Education. (Report under 51.0504)

51.2202 Environmental Health. A program that focuses on the application of environmental sciences, public health, the biomedical sciences, and environmental toxicology to the study of environmental factors affecting human health and related ecological issues, and prepares individuals to function as professional environmental health specialists. Includes instruction in epidemiology, biostatistics, toxicology, public policy analysis, public management, risk assessment, communications, environmental law and applications such as air quality, food protection, radiation protection, solid and hazardous waste management, water quality, noise abatement, housing quality, and environmental control of recreational areas.

(51.2203) Epidemiology. (Moved, Report under 26.1309)

[51.2204] Health and Medical Biostatistics. (Deleted, Report under 26.1102)

51.2205 Health/Medical Physics. A program that focuses on the application of physics, nuclear science, and engineering physics to diagnostic, treatment, and therapeutic processes and public health protection. Includes instruction in radiation biophysics, biophysics, health effects of natural and artificially induced radiation, hazard evaluation, environmental radioactivity, nuclear physics, engineering physics, radiobiology, medical radiology, calibration and dosage theory, computer applications and medical informatics, and specific research problems.

51.2206 Occupational Health and Industrial Hygiene. A program that prepares public health specialists to monitor and evaluate health and related safety standards in industrial, commercial, and government workplaces and facilities. Includes instruction in occupational health and safety standards and regulations; health-related aspects of various occupations and work environments; health hazard testing and evaluation; test equipment operation and maintenance; industrial toxicology; worker

health and safety education; and the analysis and testing of job-related equipment, behavior practices, and protective devices and procedures.

- 51.2207** **Public Health Education and Promotion.** A program that focuses on the application of educational and communications principles and methods to the promotion of preventive health measures and the education of targeted populations on health issues, and prepares individuals to function as public health educators and health promotion specialists. Includes instruction in human development; health issues across the life span; population-specific health issues; principles and methods of public health education; administration of health education campaigns and programs; evaluation methods; public communications; and applications to specific public health subjects and issues.
- 51.2208** **Community Health and Preventive Medicine. (NEW)** A program that prepares public health specialists to plan and manage health services in local community settings, including the coordination of related support services, government agencies, and private resources. Includes instruction in public health, community health services and delivery, health behavior and cultural factors, local government operations, human services, health communication and promotion, health services administration in local settings, environmental health, preventive and comparative medicine, epidemiology, biostatistics, family and community health, and applicable law and regulations.
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- Public Health/Community Nurse/Nursing.** (Report under 51.1611)
- 51.2209** **Maternal and Child Health. (NEW)** A program that focuses on the application of public health specializations, public policy studies, and the social and behavioral sciences to issues of health affecting women, children, and families; and prepares individuals to function as maternal and child health specialists. Includes instruction in research design and testing, program evaluation, public policy analysis, public finance, economics of health care, community health, family development and dynamics, women's studies, social psychology, fetal and child development, biostatistics, health education and promotion, nutrition, neonatal development, psychology, and social services delivery.
- 51.2210** **International Public Health/International Health. (NEW)** A program that focuses on the application of public health specializations, the social and behavioral sciences, and policy and communications methods to the study of health problems in low- and middle-income countries and regions, and prepares individuals to function as professional international health specialists. Includes instruction in health education and promotion, research design and evaluation, infectious disease epidemiology, international health policy and management, public nutrition and food security, information systems, program evaluation, medical anthropology, international communication, behavioral sciences, maternal and child health, demography and population policy, and health care finance and economics.
- 51.2211** **Health Services Administration. (NEW)** A program that focuses on the application of policy analysis, public administration, business management, and communications to the planning and management of health services delivery systems in the public and private sectors, and prepares individuals to function as health services administrators and managers. Includes instruction in health systems planning, public health organization and management, public health policy formulation and

analysis, finance, business and operations management, economics of health care, organizational and health communications, marketing, human resources management, and public health law and regulations.

51.2299 Public Health, Other. Any instructional program in public health not listed above.

51.23 Rehabilitation and Therapeutic Professions. Instructional content for this group of programs is defined in codes 51.2301 – 51.2399.

----- **Somatic Bodywork and Related Therapeutic Services.** (Report under 51.35 Series)

----- **Movement and Mind-Body Therapies and Education.** (Report under 51.36 Series)

----- **Energy and Biologically Based Therapies.** (Report under 51.37 Series)

51.2301 Art Therapy/Therapist. A program that prepares individuals, in consultation with other rehabilitation team members or in private practice, to use drawing and other art media forms to assess, treat, and rehabilitate individuals with mental, emotional, developmental, or physical disorders. Includes instruction in art, history and theory of art therapy, art therapeutic techniques, psychopathology, patient assessment and diagnosis, cultural diversity issues, legal and ethical practice issues, and professional standards and regulations.

51.2302 Dance Therapy/Therapist. A program that prepares individuals, in consultation with other rehabilitation team members or in private practice, to use the therapeutic application of creative dance movement to assist in promoting client rehabilitation and physical, emotional, and mental health. Includes instruction in neuroanatomy, personality development, movement and motor behavior, psychology, dance, creative expression modalities, improvisation, group psychology and leadership, client evaluation and supervision, dance therapy practice, and professional standards and ethics.

(51.2303) Hypnotherapy. (Moved, Report under 51.3603)

(51.2304) Movement Therapy. (Moved, Report under 51.3601)

51.2305 Music Therapy/Therapist. A program that prepares individuals, in association with a rehabilitation team or in private practice, to use music in therapeutic relationships to address patients' physical, psychological, cognitive, emotional, and social needs. Includes instruction in music theory and performance, human growth and development, biomedical sciences, abnormal psychology, disabling conditions, patient assessment and diagnosis, treatment plan development and implementation, clinical evaluation, record-keeping, and professional standards and ethics.

51.2306 Occupational Therapy/Therapist. A program that prepares individuals to assist patients limited by physical, cognitive, psychosocial, mental, developmental, and learning disabilities, as well as adverse environmental conditions, to maximize their independence and maintain optimum health through a planned mix of acquired skills, performance motivation, environmental adaptations, assistive technologies, and physical agents. Includes instruction in the basic medical sciences, psychology, sociology, patient assessment and evaluation, standardized

and non-standardized tests and measurements, assistive and rehabilitative technologies, ergonomics, environmental health, special education, vocational counseling, health education and promotion, and professional standards and ethics.

Occupational Therapist Assistant. (Report under to 51.0803)

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

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

Physical Therapist Assistant. (Report under 51.0806)

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

51.2310 Vocational Rehabilitation Counseling/Counselor. A program that prepares individuals to counsel disabled individuals and recovering patients in psychological, personal, social, and vocational adjustment in order to have fulfilling and productive lives. Includes instruction in patient evaluation and testing, rehabilitation program planning, patient support services and referral, job analysis, adjustment psychology, rehabilitation services provision, patient counseling and education, applicable law and regulations, and professional standards and ethics.

51.2311 Kinesiotherapy/Kinesiotherapist. (NEW) A program that prepares individuals, under the direction of physicians, to treat the effects of disease, injury, and congenital disorders through therapeutic exercise and education. Includes instruction in human anatomy, human physiology, kinesiology, biomechanics, therapeutic exercise and adapted physical education, human growth and development, motor learning and

performance, testing and measurement, first aid and cardiopulmonary resuscitation, psychology, rehabilitation procedures, patient assessment and management, and professional standards and ethics.

51.2312 **Assistive/Augmentative Technology and Rehabilitation Engineering. (NEW)** A program that prepares individuals to apply the principles of psychology, engineering, and occupational therapy to the design and implementation of technological interventions and systems to promote patient rehabilitation and function. Includes instruction in ergonomics, seating and mobility design, universal and near environment systems design, rehabilitation research, rehabilitation biomechanics, access and communications design, microprocessor-based technologies, neurological trauma, standards and testing, and service delivery management.

51.2399 **Rehabilitation and Therapeutic Professions, Other.** Any instructional program in rehabilitation and therapeutic professions not listed above.

51.24 **Veterinary Medicine (DVM).** Instructional content is defined in code 51.2401.

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

Veterinary/Animal Health Technology/Technician and Veterinary Assistant. (Report under 51.0808)

51.25 **Veterinary Biomedical and Clinical Sciences (Cert., MS, PhD).** Instructional content for this group of programs is defined in codes 51.2501– 51.2599. **Note** ➔ *Only graduate programs awarding academic credit and degrees or certificates should be reported in this series. Veterinary residencies should be reported under Series 60.03 in chapter II*

51.2501 **Veterinary Sciences/Veterinary Clinical Sciences, General (Cert., MS, PhD).** An integrated program of study in one or more of the veterinary medical or clinical sciences or a program undifferentiated as to title.

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

51.2503 **Veterinary Physiology (Cert., MS, PhD). (NEW)** A program that focuses on the scientific study of the functional dynamics of animal biological systems and their relationship to the diagnosis and treatment of disease and injury. Includes instruction in mammalian and non-mammalian physiology, laboratory physiology, physiological responses to

the environment, endocrinology, animal biotechnology, mechanisms of hormone action, organ systems, metabolism, and pathophysiology.

- 51.2504** ***Veterinary Microbiology and Immunobiology (Cert., MS, PhD). (NEW)***
A program that focuses on the scientific study of the microbial causation and immunologic processes related to animal disease, prevention, and treatment. Includes instruction in bacteriology, mycology, virology, immune response mechanisms, humoral and cell function, cancer defenses, immune system dysfunction, immunologic diseases, parasitology, pathogenesis, and disease vectors.
- 51.2505** ***Veterinary Pathology and Pathobiology (Cert., MS, PhD). (NEW)***
A program that focuses on the scientific study of the development and process of disease in domestic and wild animals and applications to diagnosis, prevention, and treatment. Includes instruction in pathogenesis, immunoparasitology, viral therapy, inherited metabolic diseases, environmental toxicology, anatomical and clinical pathology, necropsy and biopsy techniques, clinical laboratory analysis, pathological interpretation, and disease diagnosis.
- 51.2506** ***Veterinary Toxicology and Pharmacology (Cert., MS, PhD). (NEW)***
A program that focuses on the scientific study of specific environmental and food hazards affecting domestic and wild animals and the development and action of chemical antidotes and treatments. Includes instruction in small and large animal toxicology and pharmacology, neurotoxicology, pharmacodynamics, pharmacokinetics, neuropharmacology, xenobiotics, drug resistance, pesticides, toxicological pathology, genetic and molecular toxicology, environmental toxicology, drug and toxicant analysis and evaluation, and environmental radiology.
- 51.2507** ***Large Animal/Food Animal and Equine Surgery and Medicine (Cert., MS, PhD). (NEW)*** A program that focuses on the scientific study of the internal medicine and invasive and noninvasive treatment of herd, work, sport, and food animals. Includes instruction in equine medicine, swine and dairy medicine, food animal medicine, pathophysiology, large animal diseases, large animal anesthesiology and surgical procedures, preoperative and postoperative care, and specific medical specialties such as dentistry, ophthalmology, oncology, obstetrics/theriogenology, and orthopedics.
- 51.2508** ***Small/Companion Animal Surgery and Medicine (Cert., MS, PhD). (NEW)*** A program that focuses on the scientific study of the internal medicine and invasive and noninvasive treatment of companion and household animals. Includes instruction in avian medicine, pet care, companion animal medicine, pathophysiology, small animal diseases, small animal anesthesiology and surgical procedures, preoperative and postoperative care, and specific medical specialties such as dentistry, ophthalmology, oncology, obstetrics/theriogenology, and orthopedics.
- 51.2509** ***Comparative and Laboratory Animal Medicine (Cert., MS, PhD). (NEW)*** A program that focuses on the scientific study of animal models of human disease and related experimental procedures, and prepares veterinarians and animal health specialists to manage the laboratory use and care of experimental animals. Includes instruction in laboratory animal husbandry, laboratory animal disease, biohazard control, gnotobiology, breeding, comparative anatomy and physiology, comparative gene mapping, protein function, physical and mathematical

modeling, computer modeling, stem cell technology, colony and genetic stock management, cryopreservation, applicable regulations, and bioethics.

51.2510 ***Veterinary Preventive Medicine Epidemiology, and Public Health (Cert., MS, PhD). (NEW)*** A program that focuses on the study of the prevention and control of communicable animal diseases, diseases affecting humans, and prepares veterinarians to function as public health specialists. Includes instruction in animal epidemiology, biostatistics, food safety and quality assurance, food toxicology, zoonotic and infectious diseases, disease vectors and transference, production medicine, animal health, veterinary public health practice, and inspection and evaluation methods.

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

51.2599 ***Veterinary Biomedical and Clinical Sciences, Other (Cert., MS, PhD). (NEW)*** Any instructional program in veterinary biomedical and clinical sciences not listed above.

51.26 Health Aides/Attendants/Orderlies. Instructional content for this group is defined in codes 51.2601- 51.2699.

51.2601 **Health Aide.** A program that prepares individuals to provide routine care and assistance to patients under the direct supervision of other health care professionals, and/or to perform routine maintenance and general assistance in health care facilities and laboratories.

----- **Nurse/Nursing Assistant/Aide.** (Report under 51.1614)

51.2602 **Home Health Aide/Home Attendant.** A program that prepares individuals to provide routine care and support services for homebound disabled, recovering, or elderly people. Includes instruction in basic nutrition, home sanitation, infection control, first aid, taking vital signs, personal hygiene, interpersonal communication skills, supervised home management, emergency recognition and referral, geriatric care, and legal and ethical responsibilities. *(Moved from 51.1615)*

51.2603 ***Medication Aide. (NEW)*** A program that prepares individuals to administer prescribed medications; observe and report patient reactions and side effects; and perform related emergency and recording duties under the supervision of nurses and/or physicians. Includes instruction in basic anatomy and physiology, common medications and their effects, taking vital signs, oxygen administration, medication administration and application, record-keeping, and patient observation.

51.2699 ***Health Aides/Attendants/Orderlies, Other. (NEW)*** Any other instructional program that prepares individuals to provide routine patient care and assistance.

- 51.27 Medical Illustration and Informatics.** Instructional content is defined in codes 51.2703-51.2799.
- [51.2701] Acupuncture and Oriental Medicine.** (Deleted, Report under 51.3301 or 51.3302)
- (51.2702) Medical Dietitian.** (Moved, Report under 51.3101)
- 51.2703 Medical Illustration/Medical Illustrator.** A program that prepares individuals to apply the principles and techniques of art and computer-assisted imaging, graphics, and animation to create visual materials to facilitate the recording and dissemination of biomedical knowledge for educational, research, and clinical purposes. Includes instruction in anatomy, physiology, pathology, histology, embryology, neuroanatomy, medical terminology, artistic media and techniques, illustration techniques, three-dimensional modeling, prosthetics, data display design, exhibit design and production, medical photography, multimedia, computer graphics and animation, digital imaging, business management, production technology, and instructional design.
- (51.2704) Naturopathic Medicine.** (Moved, Report under 51.3303)
- (51.2705) Psychoanalysis.** (Moved, Report under 51.1507)
- 51.2706 Medical Informatics. (NEW)** A program that focuses on the application of computer science and software engineering to medical research and clinical information technology support, and the development of advanced imaging, database, and decision systems. Includes instruction in computer science, health information systems architecture, medical knowledge structures, medical language and image processing, quantitative medical decision modeling, imaging techniques, electronic medical records, medical research systems, clinical decision support, and informatics aspects of specific research and practice problems.
- 51.2799 Medical Illustration and Informatics, Other. (NEW)** Any instructional program in medical illustration and informatics not listed above.
- 51.31 Dietetics and Clinical Nutrition Services. (NEW)** Instructional content for this group of programs is defined in codes 51.3101– 51.3199.
- **Foods, Nutrition and Related Services.** (Report under 19.05 Series)
- 51.3101 Dietetics/Dietitian (RD).** A program that prepares individuals to integrate and apply the principles of the food and nutrition sciences, human behavior, and the biomedical sciences to design and manage effective nutrition programs in a variety of settings. Includes instruction in human nutrition; nutrient metabolism; the role of foods and nutrition in health promotion and disease prevention; planning and directing food service activities; diet and nutrition analysis and planning; supervision of food storage and preparation; client education; and professional standards and regulations. (*Moved from 51.2702*)
- 51.3102 Clinical Nutrition/Nutritionist. (NEW)** A program that prepares individuals to apply the principles of dietetics and the biomedical and nutrition sciences to design and manage effective nutrition programs as part of clinical treatment and therapy programs, and to manage health

care facility food services. Includes instruction in human nutrition, nutrient metabolism, the role of foods and nutrition in health promotion and disease prevention, nutrition as a treatment regime, planning and directing hospital food service programs, diet and nutrition analysis and planning, supervision of food storage and preparation, special diets, client education, and professional standards and regulations.

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

51.3104 ***Dietitian Assistant.*** A program that prepares individuals to assist registered dietitians in planning, preparing and serving meals to individuals with specific dietary needs. Includes instruction in equipment use, food preparation, diet regulations, food handling, safety and sanitary standards and administrative techniques and procedures.
(Moved from 20.0404)

51.3199 ***Dietetics and Clinical Nutrition Services, Other. (NEW)*** Any instructional program in dietetics and clinical nutrition services not listed above.

51.32 ***Bioethics/Medical Ethics. (NEW)*** Instructional content is defined in code 51.3201.

----- ***Legal Professions and Studies.*** (Report under to 22. Series)

----- ***Philosophy and Religious Studies.*** (Report under 38. Series)

----- ***Theology and Religious Vocations.*** (Report under 39. Series)

51.3201 ***Bioethics/Medical Ethics. (NEW)*** A program that focuses on the application of ethics, religion, jurisprudence, and the social sciences to the analysis of health care issues, clinical decisionmaking, and research procedures. Includes instruction in philosophical ethics, moral value, medical sociology, theology, spirituality and health, policy analysis, decision theory, and applications to problems such as death and dying, therapeutic relationships, organ transplantation, human and animal subjects, reproduction and fertility, health care justice, cultural sensitivity, needs assessment, professionalism, conflict of interest, chaplaincy, and clinical or emergency procedures.

51.33 ***Alternative and Complementary Medicine and Medical Systems. (NEW)*** Instructional content for this group of programs is defined in codes 51.3301– 51.3399.

51.3301 ***Acupuncture. (NEW)*** A program that prepares individuals for the independent professional practice of acupuncture, a Chinese system of healing based on the use of pulse diagnosis, acupuncture point selection, and needle insertion to treat imbalances in the state of bodily health or Qi. Includes instruction in basic Western medical sciences, Chinese medical anatomy and physiology, diagnostic techniques, patient observation and communication, acupuncture points and point selection, auricular and scalp acupuncture, moxibustion, acupuncture technique,

acupuncture of extremities, pain management, practice management, and professional standards and *ethics*.

- 51.3302** ***Traditional Chinese/Asian Medicine and Chinese Herbology. (NEW)***
A program that prepares individuals for the independent professional practice of Chinese herbal medicine, a system based on the use of nutrition, natural products, and prescribed medical formulae to treat imbalances in the state of bodily health as defined in the Nei Ching Su Wen and other authorities. Includes instruction in the basic Western medical sciences, history and theory of Chinese medicine, Chinese medical anatomy and physiology, Chinese herbology, herbal prescription preparation, herbal patent medicine, herbal pharmacology, Chinese internal medicine and gynecology, febrile diseases, food therapy, practice management, and professional standards and ethics.
- 51.3303** ***Naturopathic Medicine/Naturopathy (ND).*** A program that prepares individuals for the independent professional practice of naturopathic medicine, an holistic therapeutic approach combining medical knowledge with noninvasive natural, homeopathic, and non-Western therapies and emphasizing disease prevention, wellness, and self-healing. Includes instruction in the basic medical sciences, epidemiology, neuroscience, biostatistics, public and community health, laboratory and clinical diagnosis, pharmacognosy, botanical medicine, homeopathy, principles of Oriental medicine and Ayurveda, manipulative therapy, naturopathic therapeutics, therapeutic nutrition, case analysis and management, philosophy of naturopathy, patient counseling, practice management, and professional standards and ethics. (*Moved from 51.2704*)
- 51.3304** ***Homeopathic Medicine/Homeopathy. (NEW)*** A program that prepares individuals for the independent professional practice of homeopathic medicine, an holistic therapeutic system using naturally occurring substances in highly diluted forms to mimic symptoms of illness and trigger autoimmune responses, based on the law of similars and other principles derived from the work of Samuel Hahnemann and others. Includes instruction in anatomy, physiology, pathology, toxicology, philosophy and theory of homeopathy, casetaking and case analysis, repertory, materia medica, constitutional typing, proving, practice management, and professional standards and ethics.
- 51.3305** ***Ayurvedic Medicine/Ayurveda. (NEW)*** A program that prepares individuals for the independent professional practice of Ayurveda, a holistic health care system based on the use of dietary, lifestyle, spiritual, pharmacological and physical therapies to remove imbalances and restore health as defined in Vedic and other classical Sanskrit authorities in the Indian tradition. Includes instruction in Sanskrit; history, philosophy, and principles of Ayurveda; Ayurvedic pharmacology; anatomy and physiology; internal medicine; herbology; diagnostic techniques; patient examination and communication; therapeutic modalities; detoxification theory and practice; mind and body behavior modification; Yoga; clinical pediatrics and gynecology; diet therapies; treatment of specific diseases; and professional standards and ethics.
- 51.3399** ***Alternative and Complementary Medicine and Medical Systems, Other. (NEW)*** Any instructional program in alternative and complementary medicine and medical systems not listed above.

- 51.34 *Alternative and Complementary Medical Support Services. (NEW)*** Instructional content for this group of programs is defined in codes 51.3401– 51.3499.
- 51.3401 *Direct Entry Midwifery (LM, CPM). (NEW)*** A program that prepares individuals to provide pre-natal, natural birth, and immediate postpartum care to pregnant women in jurisdictions licensing direct (non-nursing) training for midwives. Includes instruction in basic obstetrics, women's health, fetal development, childbirth education, maternal nutrition and health, labor support, natural childbirth, postpartum support, prebirth counseling and risk screening, management of obstetric emergencies, patient referral, applicable regulations, and professional standards and ethics.
- 51.3499 *Alternative and Complementary Medical Support Services, Other. (NEW)*** Any instructional program in alternative and complementary medical support services not listed above.
- 51.35 *Somatic Bodywork and Related Therapeutic Services. (NEW)*** Instructional content for this group of programs is defined in codes 51.3501 – 51.3599.
- 51.3501 *Massage Therapy/Therapeutic Massage.*** A program that prepares individuals to provide relief and improved health and well-being to clients through the application of manual techniques for manipulating skin, muscles, and connective tissues. Includes instruction in Western (Swedish) massage; sports massage; myotherapy/trigger point massage; myofascial release; deep tissue massage; cranio-sacral therapy; reflexology; massage safety and emergency management; client counseling; practice management; applicable regulations; and professional standards and ethics. (*Moved from 12.0405*)
- 51.3502 *Asian Bodywork Therapy. (NEW)*** A program that prepares individuals to provide relief and improved health and well-being based on Chinese medical principles through one or more of the traditional bodywork therapies of Asia. Includes instruction in acupressure, AMMA® Therapy, Chi Nei Tsang, Five Element Shiatsu, Integrative Eclectic Shiatsu, Japanese Shiatsu, Jin Shin Do® Bodymind Acupressure™, Macrobiotic Shiatsu, Anma Therapy, Thai massage, Tui na, Zen Shiatsu, Qigong, Okazaki® Restorative Massage, principles of Western and Chinese medicine, patient counseling and observation, practice management, applicable regulations, and professional standards and ethics.
- 51.3503 *Somatic Bodywork. (NEW)*** A program that prepares individuals to promote physical and emotional balance and well-being through the application of skilled touch principles and techniques. Includes instruction in therapeutic massage and other hands-on touch methods; anatomy and physiology; structural/functional integration and various holistic health systems (Rolfing/Structural Integration, colon hydrotherapy, Breema, Hellerwork, lymphatic drainage, Rosen Method, hydrotherapy, and others); client counseling, practice management, and applicable regulations and professional standards.
- 51.3599 *Somatic Bodywork and Related Therapeutic Services, Other. (NEW)*** Any instructional program in somatic bodywork and related therapeutic services not listed above.

51.36 *Movement and Mind-Body Therapies and Education. (NEW)* Instructional content for this group of programs is defined in codes 51.3601 – 51.3699.

51.3601 *Movement Therapy and Movement Education.* A program that prepares individuals to use functional and expressive integration strategies to help promote somatic awareness and optimal psychophysical functioning. Includes instruction in skilled touch techniques, kinesthetic awareness processes, movement observation, patterning, client assessment and guidance, verbal and nonverbal communication, practice management, professional standards and ethics, and specific therapeutic and educational modalities (Alexander Technique, Aston Patterning, Body-Mind Centering, Feldenkrais Method®, Laban Movement Analysis, Trager Approach, and others).
(Moved from 51.2304)

Dance Therapy/Therapist. (Report under 51.2302)

51.3602 *Yoga Teacher Training/Yoga Therapy. (NEW)* A program that prepares individuals to function as professional instructors in the spiritual and physical therapy of Yoga in private, institutional, and clinical settings, Includes instruction in the principles of Ayurveda, philosophy of Yoga, warm-up and progressive exercises, breathing exercises, meditation, Yamas and Niyamas, instructional techniques, posture adjustment, student/client counseling and assessment, advanced Yoga disciplines and styles, business practices, and professional standards and ethics.

51.3603 *Hypnotherapy/Hypnotherapist.* A program that prepares individuals to employ the controlled inducement of altered states of consciousness, or trance, to reduce pain, resolve emotional conflicts, and enhance communications as part of diagnostic and treatment programs. Includes instruction in the principles of hypnosis and suggestion, induction and deepening, post-hypnotic suggestion, awakening techniques, regression, pacing and leading, resistance transformation, client testing and management, practice management and regulation, and professional standards and ethics. *(Moved from 51.2303)*

51.3699 *Movement and Mind-Body Therapies and Education, Other. (NEW)*
Any instructional program in movement and mind-body therapies not listed above.

51.37 *Energy and Biologically Based Therapies. (NEW)* Instructional content for this group of programs is defined in codes 51.3701 – 51.3799.

51.3701 *Aromatherapy. (NEW)* A program that prepares individuals to provide therapeutic care through the preparation and application of extracted essential oils from plants, including flowers (botanicals), roots, berries, and bark. Includes instruction in aromatherapy history and theory, basic physiology of absorption, aromachemistry, organic chemistry, botanical taxonomy, carrier oils, essential oils, extraction methods, blending techniques, application methods, safety, client consultation and treatment planning, business management, professional standards and ethics, and applicable regulations.

51.3702 *Herbalism/Herbalist. (NEW)* A program that prepares individuals to utilize the materia medica and clinical practices of Western, Native American, African, Australasian, and other herbal medicine traditions to

prevent and cure illness and temporary physical disorders. Includes instruction in basic anatomy, physiology, pathology, and toxicology; nutrition; terminology and materia medica; therapeutic herbalism; herbal pharmacy; botanicals and ethnobotany; wildcrafting and harvesting; labeling and dispensing phytotherapy; counterindications; practice management; consultation skills; and professional standards and ethics.

51.3703 ***Polarity Therapy. (NEW)*** A program that prepares individuals to promote health and well-being through application of the integrative therapeutic system based on the Human Energy Field theory developed by Randolph Stone. Includes instruction in polarity theory and principles, energy-based and orthodox anatomy and physiology, polarity processing, polarity bodywork, polarity yoga, energetic nutrition, energetic evaluation and assessment, client communication, practice management, and professional standards and ethics.

51.3704 ***Reiki. (NEW)*** A program that prepares individuals to promote physical, emotional, and spiritual balance and healing through the manipulation of the body's energy field to increase healing energy. Includes instruction in the history and philosophy of Usui Reiki, attunement, empowerment, self-treatment, direct and distance healing techniques, healing symbols, aura clearing, Reiki meditation, practice management, and related Reiki systems such as Lightarian, Urevia, and Magnified Healing.

51.3799 ***Energy and Biologically Based Therapies, Other. (NEW)*** Any instructional program in alternative, complementary, and somatic health and therapeutic services not listed above (bioenergetics, cranio-sacral therapy, Therapeutic Touch, Qi Gong, and others).

51.99 **Health Professions and Related Clinical Sciences, Other.** Instructional content is defined in code 51.9999.

51.9999 **Health Professions and Related Clinical Sciences, Other.** Any instructional program in the health professions and related clinical sciences not listed above.

52. BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES.

Instructional programs that prepare individuals to perform managerial, technical support, and applied research functions related to the operation of commercial and non-profit enterprises and the buying and selling of goods and services.

52.01 Business/Commerce, General. Instructional content is defined in code 52.0101.

52.0101 **Business/Commerce, General.** A program that focuses on the general study of business, including the processes of interchanging goods and services (buying, selling and producing), business organization, and accounting as used in profit-making and nonprofit public and private institutions and agencies. The programs may prepare individuals to apply business principles and techniques in various occupational settings.

52.02 Business Administration, Management and Operations. Instructional content is defined in codes 52.0201 – 52.0299.

- 52.0201 Business Administration and Management, General.** A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.
- 52.0202 Purchasing, Procurement/Acquisitions and Contracts Management.** A program that prepares individuals to manage and/or administer the processes by which a firm or organization contracts for goods and services to support its operations, as well as contracts it to sell to other firms or organizations. Includes instruction in contract law, negotiations, buying procedures, government contracting, cost and price analysis, vendor relations, contract administration, auditing and inspection, relations with other firm departments, and applications to special areas such as high-technology systems, international purchasing, and construction.
- 52.0203 Logistics and Materials Management.** A program that prepares individuals to manage and coordinate all logistical functions in an enterprise, ranging from acquisitions to receiving and handling, through internal allocation of resources to operations units, to the handling and delivery of output. Includes instruction in acquisitions and purchasing, inventory control, storage and handling, just-in-time manufacturing, logistics planning, shipping and delivery management, transportation, quality control, resource estimation and allocation, and budgeting.
- 52.0204 Office Management and Supervision.** A program that prepares individuals to supervise and manage the operations and personnel of business offices and management-level divisions. Includes instruction in employee supervision, management, and labor relations; budgeting; scheduling and coordination; office systems operation and maintenance; office records management, organization, and security; office facilities design and space management; preparation and evaluation of business management data; and public relations.
- 52.0205 Operations Management and Supervision.** A program that prepares individuals to manage and direct the physical and/or technical functions of a firm or organization, particularly those relating to development, production, and manufacturing. Includes instruction in principles of general management, manufacturing and production systems, plant management, equipment maintenance management, production control, industrial labor relations and skilled trades supervision, strategic manufacturing policy, systems analysis, productivity analysis and cost control, and materials planning.
- 52.0206 Non-Profit/Public/Organizational Management.** A program that prepares individuals to manage the business affairs of non-profit corporations, including foundations, educational institutions, associations, and other such organizations, and public agencies and governmental operations. Includes instruction in business management, principles of public administration, principles of accounting and financial management, human resources management, taxation of non-profit organizations, and business law as applied to non-profit organizations.

- 52.0207** **Customer Service Management. (NEW)** A program that prepares individuals to supervise and monitor customer service performance and manage frontline customer support services, call centers/help desks, and customer relations. Includes instruction in customer behavior; specialized information technology and systems management; developing and using customer service databases; user surveys and other feedback mechanisms; strategic and performance planning and analysis; operations management; personnel supervision; and communications and marketing skills.
- 52.0208** **E-Commerce/Electronic Commerce. (NEW)** A program that prepares individuals to plan, manage, supervise, and market electronic business operations, products, and services provided online via the Internet. Includes instruction in business administration, information technology, information resources management, web design, computer and Internet law and policy, computer privacy and security, e-trading, insurance, electronic marketing, investment capital planning, enterprise operations, personnel supervision, contracting, and product and service networking.
- 52.0209** **Transportation/Transportation Management. (NEW)** A program that prepares individuals to plan, administer, and coordinate physical transportation operations, networks, and systems. Includes instruction in transportation systems and technologies; traffic logistics and engineering; multi- and intermodal transportation systems; regional integration; facilities design and construction; transportation planning and finance; demand analysis and forecasting; carrier management; behavioral issues; transportation policy and law; intelligent systems; and applications to aviation, maritime, rail, and highway facilities and systems.
- 52.0299** **Business Administration, Management and Operations, Other.** Any instructional program in business and administration not listed above.
- 52.03** **Accounting and Related Services.** Instructional content for this group of programs is defined in codes 52.0301 – 52.0399.
- 52.0301** **Accounting.** A program that prepares individuals to practice the profession of accounting and to perform related business functions. Includes instruction in accounting principles and theory, financial accounting, managerial accounting, cost accounting, budget control, tax accounting, legal aspects of accounting, auditing, reporting procedures, statement analysis, planning and consulting, business information systems, accounting research methods, professional standards and ethics, and applications to specific for-profit, public, and non-profit organizations.
- 52.0302** **Accounting Technology/Technician and Bookkeeping.** A program that prepares individuals to provide technical administrative support to professional accountants and other financial management personnel. Includes instruction in posting transactions to accounts, record-keeping systems, accounting software operation, and general accounting principles and practices.
- 52.0303** **Auditing. (NEW)** A program that prepares individuals, including certified accountants, to perform independent internal and external appraisals to evaluate organizational financial and operational activities, ensure

compliance with laws and policies, safeguard assets, and promote effective planning and resource allocation. Includes instruction in advanced accounting, audit tools and techniques, sampling, risk and control, audit planning, audit function management, law and regulations, environmental auditing, information technology applications, professional standards and ethics, and specific industry and service sector problems.

----- **Accounting and Computer Science.** (Report under 30.1601).

52.0304 **Accounting and Finance. (NEW)** An integrated or combined program in accounting and finance that prepares individuals to function as accountants and financial managers or analysts.

52.0305 **Accounting and Business/Management. (NEW)** An integrated or combined program in accounting and business administration/management that prepares individuals to function as accountants and business managers.

52.0399 **Accounting and Related Services, Other.** Any instructional program in accounting not listed above.

52.04 Business Operations Support and Assistant Services. Instructional content for this group of programs is defined in codes 52.0401 – 52.0499.

52.0401 **Administrative Assistant and Secretarial Science, General.** A program that generally prepares individuals to perform the duties of administrative assistants and/or secretaries and stenographers. Includes instruction in business communications, principles of business law, word processing and data entry, office machines operation and maintenance, office procedures, public relations, secretarial accounting, filing systems and records management, and report preparation.

52.0402 **Executive Assistant/Executive Secretary.** A program that prepares individuals to perform the duties of special assistants and/or personal secretaries for business executives and top management. Includes instruction in business communications, principles of business law, public relations, scheduling and travel management, secretarial accounting, filing systems and records management, conference and meeting recording, report preparation, office equipment and procedures, office supervisory skills, and professional standards and legal requirements.

(52.0403) **Legal Administrative Assistant/Secretary.** (Moved, Report under 22.0301)

(52.0404) **Medical Secretary.** (Moved, Report under 51.0716)

(52.0405) **Court Reporting/Court Reporter.** (Moved, Report under 22.0303)

52.0406 **Receptionist.** A program that prepares individuals to perform frontline public relations duties for a business, organization, or answering service. Includes instruction in telephone answering techniques, responding to information requests, keeping caller and/or visitor records, placing business calls, operating telephone switchboards and/or other

communications equipment, relaying incoming and interoffice calls, schedule maintenance, and public relations skills.

- 52.0407 Business/Office Automation/Technology/Data Entry.** A program that prepares individuals to support business information operations by using computer equipment to enter, process, and retrieve data for a wide variety of administrative purposes. Includes instruction in using basic business software and hardware; business computer networking; principles of desktop publishing; preparing mass mailings; compiling and editing spreadsheets; list maintenance; preparing tables and graphs; receipt control; and preparing business performance reports.
- 52.0408 General Office Occupations and Clerical Services.** A program that prepares individuals to provide basic administrative support under the supervision of office managers, administrative assistants, secretaries, and other office personnel. Includes instruction in typing, keyboarding, filing, general business correspondence, office equipment operation, and communications skills.
- 52.0409 Parts, Warehousing, and Inventory Management Operations. (NEW)**
A program that prepares individuals to provide administrative, technical, and managerial support in the operation of warehouses, control of inventory, parts identification, and the performance of counter services for customers. Includes instruction in record-keeping, equipment operation, database entry, supply logistics, shop operations and math, and customer and supplier relations.
- 52.0410 Traffic, Customs, and Transportation Clerk/Technician. (NEW)** A program that prepares individuals to perform duties associated with managing revenue-based transportation services, such as toll roads and waterways, and to assist in the dispatch and control of fleet-based traffic for businesses and public services. Includes instruction in such subjects as record-keeping; operation of communications equipment; basic transportation operations management; revenue collection and change-making; and applicable laws, policies, and procedures.
- 52.0411 Customer Service Support/Call Center/Teleservice Operation. (NEW)**
A program that prepares individuals to assist customers with inquiries and problems in frontline call centers, help desks, teleservice centers, and online. Includes instruction in user interfaces and user behavior; principles of hardware and software systems operation; customer interaction skills; telephone and e-mailing skills; data entry; and database and Internet searching and retrieval.
- 52.0499 Business Operations Support and Secretarial Services, Other.** Any instructional program in administrative and secretarial services not listed above.
- 52.05 Business/Corporate Communications.** Instructional content is defined in code 52.0501.
- 52.0501 Business/Corporate Communications.** A program that prepares individuals to function in an organization as a composer, editor and proofreader of business or business-related communications.
- 52.06 Business/Managerial Economics.** Instructional content is defined in code 52.0601.

- 52.0601 Business/Managerial Economics.** A program that focuses on the application of economics principles to the analysis of the organization and operation of business enterprises. Includes instruction in monetary theory, banking and financial systems, theory of competition, pricing theory, wage and salary/incentive theory, analysis of markets, and applications of econometrics and quantitative methods to the study of particular businesses and business problems.
- 52.07 Entrepreneurial and Small Business Operations.** Instructional content for this group of programs is defined in codes 52.0701 – 52.0799.
- 52.0701 Entrepreneurship/Entrepreneurial Studies.** A program that generally prepares individuals to perform development, marketing and management functions associated with owning and operating a business.
- 52.0702 Franchising and Franchise Operations.** A program that prepares individuals to manage and operate franchises. Includes instruction in legal requirements, set-up costs and capitalization requirements, financing, and applications to specific franchise opportunities.
- 52.0703 Small Business Administration/Management. (NEW)** A program that prepares individuals to develop and manage independent small businesses. Includes instruction in business administration; enterprise planning and entrepreneurship; start-up; small business operations and problems; personnel supervision; capitalization and investment; taxation; business law and regulations; e-commerce; home business operations; and applications to specific sectors, products, and services.
- 52.0799 Entrepreneurial and Small Business Operations, Other.** Any instructional program in enterprise management and entrepreneurship not listed above.
- 52.08 Finance and Financial Management Services.** Instructional content for this group of programs is defined in codes 52.0801– 52.0899.
- 52.0801 Finance, General.** A program that generally prepares individuals to plan, manage, and analyze the financial and monetary aspects and performance of business enterprises, banking institutions, or other organizations. Includes instruction in principles of accounting; financial instruments; capital planning; funds acquisition; asset and debt management; budgeting; financial analysis; and investments and portfolio management.
- (52.0802) Actuarial Science.** (Moved, Report under 52.1304)
- 52.0803 Banking and Financial Support Services.** A program that prepares individuals to perform a wide variety of customer services in banks, insurance agencies, savings and loan companies, and related enterprises. Includes instruction in communications and public relations skills, business equipment operation, and technical skills applicable to the methods and operations of specific financial or insurance services.
- 52.0804 Financial Planning and Services.** A program that prepares individuals to plan and manage the financial interests and growth of individuals and institutions. Includes instruction in portfolio management, investment

management, estate planning, insurance, tax planning, strategic investing and planning, financial consulting services, and client relations.

(52.0805) Insurance and Risk Management. (Moved, Report under 52.1701).

52.0806 International Finance. A program that prepares individuals to manage international financial operations and related currency transactions. Includes instruction in international banking, international monetary and financial policy, money and capital markets, foreign exchange, risk analysis, and international cash flow operations.

52.0807 Investments and Securities. A program that prepares individuals to manage assets placed in capital markets, and related technical operations. Includes instruction in security analysis, debt and equity analysis, investment strategies, securities markets, computer-assisted research, portfolio management, portfolio performance analysis, and applications to specific investment problems and business situations.

52.0808 Public Finance. A program that prepares individuals to manage the financial assets and budgets of public sector organizations. Includes instruction in public trusts and investments; the laws and procedures used to plan, prepare and administer public agency budgets; and the preparation and analysis of public budget projections and policies.

52.0809 Credit Management. (NEW) A program that prepares individuals to perform and/or manage operations concerning personal and corporate credit, collateral, loan processing, and related financial agency communications. Includes instruction in general finance and banking principles, insurance, real estate, taxation, business law and regulations, quantitative methods, financial computer systems applications, database management, communications skills, business and office management, and professional standards and ethics.

52.0899 Finance and Financial Management Services, Other. Any instructional program in financial management and services not listed above.

52.09 Hospitality Administration/Management. Instructional content for this group of programs is defined in codes 52.0901 – 52.0999.

52.0901 Hospitality Administration/Management, General. A program that prepares individuals to serve as general managers and directors of hospitality operations on a system-wide basis, including both travel arrangements and promotion and the provision of traveler facilities. Includes instruction in principles of operations in the travel and tourism, hotel and lodging facilities, food services, and recreation facilities industries; hospitality marketing strategies; hospitality planning; management and coordination of franchise and unit operations; business management; accounting and financial management; hospitality transportation and logistics; and hospitality industry policies and regulations.

[52.0902] Hotel, Motel, and Restaurant Management. (Deleted, Report under 52.0904 or 52.0905)

52.0903 Tourism and Travel Services Management. A program that prepares individuals to manage travel-related enterprises and related convention and/or tour services. Includes instruction in travel agency management,

tour arranging and planning, convention and event planning, travel industry operations and procedures, tourism marketing and promotion strategies, travel counseling, travel industry law, international and domestic operations, and travel and tourism policy.

- 52.0904** ***Hotel/Motel Administration/Management. (NEW)*** A program that prepares individuals to manage operations and facilities that provide lodging services to the traveling public. Includes instruction in hospitality industry principles; supplies purchasing, storage and control; hotel facilities design and planning; hospitality industry law; personnel management and labor relations; financial management; marketing and sales promotion; convention and event management; front desk operations; and applications to specific types of hotels and motel operations.
- 52.0905** ***Restaurant/Food Services Management. (NEW)*** A program that prepares individuals to plan, manage, and market restaurants, food services in hospitality establishments, food service chains and franchise networks, and restaurant supply operations. Includes instruction in hospitality administration, food services management, wholesale logistics and distribution, franchise operations, business networking, personnel management, culinary arts, business planning and capitalization, food industry operations, marketing and retailing, business law and regulations, finance, and professional standards and ethics.
- 52.0906** ***Resort Management. (NEW)*** A program that prepares individuals to plan, manage, and market comprehensive vacation facilities and services and related products. Includes instruction in hospitality administration, hotel/motel management, restaurant and food services management, facilities planning, leisure studies, recreation administration, marketing, recreation equipment and grounds operations and maintenance, business finance, insurance and taxation, event management and guest services, personnel management, travel and logistics management, safety and health services, professional standards and ethics, and applications to specific vacation types and locations.
- 52.0999** ***Hospitality Administration/Management, Other.*** Any instructional program in hospitality service management not listed above.
- 52.10** **Human Resources Management and Services.** Instructional content for this group of programs is defined in codes 52.1001 – 52.1099.
- 52.1001** **Human Resources Management/Personnel Administration, General.** A program that generally prepares individuals to manage the development of human capital in organizations, and to provide related services to individuals and groups. Includes instruction in personnel and organization policy, human resource dynamics and flows, labor relations, sex roles, civil rights, human resources law and regulations, motivation and compensation systems, work systems, career management, employee testing and assessment, recruitment and selection, managing employee and job training programs, and the management of human resources programs and operations.
- 52.1002** **Labor and Industrial Relations.** A program that focuses on employee-management interactions and the management of issues and disputes regarding working conditions and worker benefit packages, and that may

prepare individuals to function as labor or personnel relations specialists. Includes instruction in labor history, policies and strategies of the labor movement, union organization, labor-management negotiation, labor law and contract interpretation, labor economics, welfare and benefit packages, grievance procedures, and labor policy studies.

52.1003 **Organizational Behavior Studies.** A program that focuses on the scientific study of the behavior and motivations of individuals functioning in organized groups, and its application to business and industrial settings. Includes instruction in organization theory, industrial and organizational psychology, social psychology, sociology of organizations, reinforcement and incentive theory, employee relations strategies, organizational power and influence, organization stratification and hierarchy, leadership styles, and applications of operations research and other methodologies to organizational analysis.

52.1004 **Labor Studies. (NEW)** A program that focuses on the study of various aspects of work, labor organization and policy, and labor movements from the perspective of the social sciences and history. Includes instruction in labor history; political and ideological issues; worker movements and social organizations; civil rights; labor law and policy studies; labor economics; international and comparative labor studies; and applications to specific industries, groups, locations, and time periods.

52.1005 **Human Resources Development. (NEW)** A program that prepares individuals to apply integrated training, organizational development, and career planning and counseling skills to the design, management, and evaluation of programs to improve individual productivity, employability, and job satisfaction and organizational effectiveness. Includes instruction in psychology; organizational behavior; principles of adult education; occupational counseling; skill testing and evaluation; program design; consulting practice; organizational development; and applications to issues such as training, management development, customer service, and total quality management.

52.1099 **Human Resources Management and Services, Other.** Any instructional program in human resources management not listed above.

52.11 **International Business.** Instructional content is defined in code 52.1101.

52.1101 **International Business/Trade/Commerce.** A program that prepares individuals to manage international businesses and/or business operations. Includes instruction in the principles and processes of export sales, trade controls, foreign operations and related problems, monetary issues, international business policy, and applications to doing business in specific countries and markets.

52.12 **Management Information Systems and Services.** Instructional content for this group of programs is defined in codes 52.1201– 52.1299.

----- **Computer and Information Sciences and Support Services.**
(Report under 11. Series)

52.1201 **Management Information Systems, General.** A program that generally prepares individuals to provide and manage data systems and related

facilities for processing and retrieving internal business information; select systems and train personnel; and respond to external data requests. Includes instruction in cost and accounting information systems, management control systems, personnel information systems, data storage and security, business systems networking, report preparation, computer facilities and equipment operation and maintenance, operator supervision and training, and management information systems policy and planning.

[52.1202] Business Computer Programming/Programmer. (Deleted, Report under 11.0202)

[52.1203] Business Systems Analysis and Design. (Deleted, Report under 11.0501)

(52.1204) Business Systems Networking. (Moved, Report under 11.0901)

(52.1205) Business Computer Facilities Operator. (Moved, Report under 11.1099)

52.1206 Information Resources Management/CIO Training. (NEW) A program that prepares individuals to apply principles of information technology, computer systems management, and business operations to the planning, management, and evaluation of information services in organizations. Includes instruction in telecommunications, systems planning and integration, information policy, information security, contracting and purchasing, budgeting, information technology, operations management, human resources, communications skills, and applicable law and regulations.

52.1207 Knowledge Management. (NEW) A program that focuses on the study of knowledge management in government agencies and corporations for the purpose of supporting stated organizational goals and objectives, and prepares individuals to function as information resource managers. Includes instruction in information technology, principles of computer and information systems, management information systems, applicable policy and regulations, and operations and personnel management.

52.1299 Management Information Systems and Services, Other. Any program in business information and data processing services not listed above.

52.13 Management Sciences and Quantitative Methods. Instructional content for this group of programs is defined in codes 52.1301– 52.1399.

52.1301 Management Science, General. A general program that focuses on the application of mathematical modeling, programming, forecasting and operations research techniques to the analysis of problems of business organization and performance. Includes instruction in optimization theory and mathematical techniques, stochastic and dynamic modeling, operations analysis, and the design and testing of prototype systems and evaluation models.

----- Operations Research. (Report under 14.3701)

52.1302 Business Statistics. A program that focuses on the application of

mathematical statistics to the description, analysis, and forecasting of business data. Includes instruction in statistical theory and methods, computer applications, data analysis and display, long- and short-term forecasting methods, and market performance analysis.

52.1304 Actuarial Science. A program that focuses on the mathematical and statistical analysis of risk, and their applications to insurance and other business management problems. Includes instruction in forecasting theory, quantitative and non-quantitative risk measurement methodologies, development of risk tables, secondary data analysis, and computer-assisted research methods. *(Moved from 52.0802)*

52.1399 Management Sciences and Quantitative Methods, Other. Any instructional program in business quantitative methods and management science not listed above.

52.14 Marketing. Instructional content for this group of programs is defined in codes 52.1401– 52.1499.

52.1401 Marketing/Marketing Management, General. A program that generally prepares individuals to undertake and manage the process of developing consumer audiences and moving products from producers to consumers. Includes instruction in buyer behavior and dynamics, principle of marketing research, demand analysis, cost-volume and profit relationships, pricing theory, marketing campaign and strategic planning, market segments, advertising methods, sales operations and management, consumer relations, retailing, and applications to specific products and markets.

52.1402 Marketing Research. A program that prepares individuals to provide analytical descriptions of consumer behavior patterns and market environments to marketing managers and other business decision-makers. Includes instruction in survey research methods, research design, new product test marketing, exploratory marketing, consumer needs and preferences analysis, geographic analysis, and applications to specific products and markets.

52.1403 International Marketing. A program that prepares individuals to perform marketing activities in enterprises primarily engaged in exporting or importing goods and services in world markets. Includes instruction in international trade controls, foreign trade operations, locating markets, negotiation practices, monetary issues, and international public relations.

52.1499 Marketing, Other. Any instructional program in general marketing and marketing research not listed above.

52.15 Real Estate. Instructional content is defined in code 52.1501.

52.1501 Real Estate. A program that prepares individuals to develop, buy, sell, appraise, and manage real property. Includes instruction in land use development policy, real estate law, real estate marketing procedures, agency management, brokerage, property inspection and appraisal, real estate investing, leased and rental properties, commercial real estate, and property management.

52.16 Taxation. Instructional content is defined in code 52.1601.

52.1601 Taxation. A program that prepares individuals to provide tax advice and management services to individuals and corporations. Includes instruction in tax law and regulations, tax record systems, individual and corporate income taxation, tax planning, partnerships and fiduciary relationships, estates and trusts, property depreciation, capital gains and losses, dispositions, transfers, liquidity, valuation, and applications to specific tax problems.

52.17 Insurance. (NEW) Instructional content is defined in code 52.1701.

52.1701 Insurance. A program that prepares individuals to manage risk in organizational settings and provide insurance and risk-aversion services to businesses, individuals, and other organizations. Includes instruction in casualty insurance and general liability, property insurance, employee benefits, social and health insurance, loss adjustment, underwriting, risk theory, and pension planning. *(Moved from 52.0805)*

52.18 General Sales, Merchandising and Related Marketing Operations. (NEW)
Instructional content for this group of programs is defined in codes 52.1801– 52.1899.

Sales and Marketing Operations/Marketing and Distribution Teacher Education. (Report under 13.1310)

52.1801 Sales, Distribution, and Marketing Operations, General. A program that focuses on the general process and techniques of direct wholesale and retail buying and selling operations and introduces individuals to related careers. Includes instruction in the principles of entrepreneurial economics, basic sales skills, the distribution channels for goods and services, and supervised practical application experiences. *(Moved from 08.0708 and 08.0709)*

52.1802 Merchandising and Buying Operations. A program that prepares individuals to function as professional buyers of resale products and product lines for stores, chains, and other retail enterprises. Includes instruction in product evaluation, merchandising, applicable aspects of brand and consumer research, principles of purchasing, and negotiation skills. *(Moved from 08.0704)*

52.1803 Retailing and Retail Operations. A program that prepares individuals to perform operations associated with retail sales in a variety of settings. Includes instruction in over-the-counter and other direct sales operations in business settings, basic bookkeeping principles, customer service, team/staff leadership and supervision, floor management, and applicable technical skills. *(Moved from 08.0705)*

Consumer Merchandising/Retailing Management. (Report under 19.0203)

52.1804 Selling Skills and Sales Operations. A program that prepares individuals to possess the skills associated with direct promotion of products and services to potential customers and to function as independent sales representatives and managers. Includes instruction in consumer psychology, image projection, public speaking and

interpersonal communications, sales organization and operations, customer relations, professional standards and ethics, and applicable technical skills. *(Moved from 08.0706)*

52.1899 **General Merchandising, Sales, and Related Marketing Operations, Other.** Any instructional program in merchandising, sales, and related marketing operations not listed above.

52.19 **Specialized Sales, Merchandising and Marketing Operations. (NEW)** Instructional content for this group of programs is defined in codes 52.1901 – 52.1999.

52.1901 **Auctioneering.** A program that prepares individuals for professional careers as auctioneers and auction managers, and for meeting applicable state licensing requirements. Includes instruction in bid calling, public speaking, ringworking, auction techniques, salesmanship skills, auction clerking and cashiering, auction advertising, working independently or with auction houses, contracts and agency, applicable sales law, and managing both general auctions and auctions specializing in commodities such as antiques, consignments, farm equipment, industrial equipment, real estate, livestock, and automobiles. *(Moved from 08.0701)*

52.1902 **Fashion Merchandising.** A program that prepares individuals to promote product lines/brands, and organize promotional campaigns, at the wholesale level to attract retailer interest, wholesale purchasing, and supply contracts. Includes instruction in wholesaling, wholesale advertising, selling, and customer relations. *(Moved from 08.0102)*

52.1903 **Fashion Modeling.** A program that prepares individuals to present and display fashion, apparel, and accessories products in wholesale and retail settings, either on the person or via props and natural or artificial settings. Includes instruction in modeling skills, health and cosmetic principles, fashion show management, display design and production, and applicable aspects of advertising and fashion photography. *(Moved from 08.0103)*

52.1904 **Apparel and Accessories Marketing Operations.** A program that prepares individuals to perform operations connected with the distribution and sale of apparel and accessories. Includes instruction in wholesaling and retailing; apparel technologies; distribution; customer sales and service skills; and principles of consumer research and sales forecasting. *(Moved from 08.0101)*

52.1905 **Tourism and Travel Services Marketing Operations. (NEW)** A program that prepares individuals to provide direct retail services to hotel and motel clients and customers in a variety of settings. Includes instruction in the principles of hotel/motel operations, customer sales and assistance operations and techniques, telephone operations, and basic office management.

52.1906 **Tourism Promotion Operations.** A program that prepares individuals to perform marketing and sales operations connected with the promotion of tourism in public and private sector settings. Includes instruction in principles of marketing research and advertising, promotional campaign organization, media relations, and applicable technical and administrative skills. *(Moved from 08.1104)*

- 52.1907** **Vehicle and Vehicle Parts and Accessories Marketing Operations. (NEW).** A program that prepares individuals to perform operations connected with the distribution and sale of replacement parts and other end-use supplies in the automotive, marine, and aviation industries. Includes instruction in wholesaling and retailing; principles of vehicular technologies; storage and distribution; customer sales and service skills; and principles of consumer research and sales forecasting.
- 52.1908** **Business and Personal/Financial Services Marketing Operations. (NEW)** A program that prepares individuals to perform marketing and operational tasks associated with the provision of personal and financial services. Includes instruction in banking, marketing research, advertising, promotional campaign organization, insurance, media relations, and applicable technical and administrative skills
- 52.1909** **Special Products Marketing Operations. (NEW)** A program that prepares individuals to perform marketing and sales operations connected with the promotion of special products, including floristry, food, and home and office products. Includes instruction in principles of marketing research and advertising, promotional campaign organization, media relations, and applicable technical and administrative skills.
- 52.1910** **Hospitality and Recreation Marketing Operations. (NEW)** A program that prepares individuals to provide marketing services in the hospitality and leisure fields. Includes instruction in hospitality operations, customer sales and assistance operations and techniques, telephone operations, basic office management, retail sports, recreation equipment, food and beverage .
- 52.1999** **Specialized Merchandising, Sales, and Marketing Operations, Other. (NEW)** Any instructional program in sales, marketing, and distribution operations not listed above.
- 52.20** **Construction Management. (NEW)** Instructional content is defined in code 52.2001.
- 52.2001** **Construction Management. (NEW)** A program that prepares individuals to manage, coordinate, and supervise the construction process from concept development through project completion on timely and economic bases. Includes instruction in commercial, residential, mechanical, highway/heavy civil, electrical, environmental, industrial, and specialty construction; facilities management; project planning; budgeting and cost control; logistics and materials management; personnel management and labor relations; site safety; construction contracting; construction processes and techniques; organization and scheduling; and applicable codes and regulations.
- 52.99** **Business, Management, Marketing, and Related Support Services, Other.** Instructional content is defined in code 52.9999.
- 52.9999** **Business, Management, Marketing, and Related Support Services, Other.** Any instructional program in business, management, marketing and related support services not listed above.

53. **Programs for Series 53. (High School/Secondary Diplomas and Certificate programs) are located in chapter VI. (beginning on page 250).**
54. **HISTORY (NEW)** Instructional programs that focus on the study and interpretation of past events, institutions, issues, and cultures.
- 54.01 History.** The instructional content for this group of programs is defined in codes 54.0101-54.0199. *(Moved from 45.08 Series)*
- 54.0101 History, General.** A program that focuses on the general study and interpretation of the past, including the gathering, recording, synthesizing and criticizing of evidence and theories about past events. Includes instruction in historiography; historical research methods; studies of specific periods, issues and cultures; and applications to areas such as historic preservation, public policy, and records administration. *(Moved from 45.0801)*
- **Classical and Ancient Near Eastern Languages and Literatures.** (Report under 16.12 Series)
- **Historic Preservation and Conservation.** (Report under 30.1201)
- **Medieval and Renaissance Studies.** (Report under 30.1301)
- **Theatre Literature, History and Criticism.** (Report under 50.0505)
- **Art History, Criticism and Conservation.** (Report under 50.0703)
- **History, Literature and Theory.** (Report under 50.0902)
- 54.0102 American History (United States).** A program that focuses on the development of American society, culture, and institutions from the Pre-Columbian period to the present. Includes instruction in American historiography, American history sources and materials, historical research methods, and applications to the study of specific themes, issues, periods, and institutions. *(Moved from 45.0802)*
- **American/United States Studies/Civilization.** (Report under 05.0102)
- 54.0103 European History.** A program that focuses on the development of European society, culture, and institutions from the origins to the present. Includes instruction in European historiography, European history sources and materials, historical research methods, and applications to the study of specific themes, issues, periods, and institutions. *(Moved from 45.0803)*
- **European Studies/Civilization.** (Report under 05.0106)
- 54.0104 History and Philosophy of Science and Technology.** A program that focuses on the historical evolution of scientific theories and science applications and technologies, as well as the philosophy of science and its historical socio-economic context. Includes instruction in the concepts

and methods of philosophical inquiry, historiography of science, and research methods in the history of the scientific and engineering disciplines, including mathematics. (*Moved from 45.0804*)

----- **Science, Technology and Society.** (Report under 30.1501)

54.0105 Public/Applied History and Archival Administration. A program that focuses on the application of history and administrative skills to the recording of public events and the management of related historical resources. Includes instruction in historical research methods, archives and records management, the planning and administration of public records services and history projects, and applications to specific problems in public organizations, government agencies, foundations, and records facilities. (*Moved from 45.0805*)

54.0106 Asian History. (NEW) A program that focuses on the development of the societies, cultures, and institutions of the Asian Continent from their origins to the present. Includes instruction in the historiography of specific cultures and periods; sources and materials; historical research methods; and applications to the study of specific themes, issues, periods, and institutions.

----- **South Asian Studies.** (Report under 05.0112)

----- **Southeast Asian Studies.** (Report under 05.0113)

54.0107 Canadian History. (NEW) A program that focuses on the study of the society, culture, and institutions of Canada from its origins to the present. Includes instruction in Canadian historiography, sources and materials, historical research methods, and applications to the study of specific themes, issues, periods, and institutions.

----- **Canadian Studies.** (Report under 05.0115)

----- **Library Science/Librarianship.** (Report under 25.0101)

----- **Museum Studies/Museology.** (Report under 30.1401)

54.0199 History, Other. Any instructional program in history not listed above. (*Moved from 45.0899*)

55. Programs for Series 55 (French/Canadian Language and Literature/Letters) are located in appendix A.

CHAPTER II CONSUMER AND HOMEMAKING EDUCATION PROGRAMS (Non-postsecondary level). All programs have been deleted.

[20.01] CONSUMER AND HOMEMAKING EDUCATION (Non-postsecondary level).
All programs for this Series have been deleted. This includes programs in series 20.01 and all associated 6-digit programs.

CHAPTER II

DENTAL, MEDICAL AND VETERINARY RESIDENCY PROGRAMS

60. Residency Programs. This is a new series established for the reporting of residency training programs. The reporting codes for these programs have undergone substantial renumbering (summarized below). (*Refer to the Crosswalk in table 3 for a specification of the renumbering system that was implemented*).

- *Dental residency programs (located in Series 51.28 in the CIP-1990) have been moved to (and should be reported under) Series 60.01;*
- *Medical residency programs (previously located in Series 51.29) have been moved to (and should be reported under) Series 60.02;*
- *Veterinary residency programs (previously in Series 51.30) have been moved to (and should be reported under) Series 60.03.*

Residency programs are designed to prepare medical doctors (M.D.), or osteopaths (DO), dentists (DDS, D.M.D.), and veterinarians (D.V.M.) for certification as practitioners of recognized specialties in their respective professions. These programs are approved and accredited by designated professional associations and require from one to five years to complete, depending on the program. Medical residencies usually require completion of an internship after the M.D. degree for program entry, while requirements vary for dentistry and veterinary programs. These programs are offered by professional schools, independent teaching hospitals and clinics, and other approved facilities. Data on residency program enrollments and completions are only partially collected and analyzed by the U.S. Department of Education. Residency programs that also result in an academic degree completion, such as an MS or Ph.D., should be reported under one of the Clinical Sciences codes (51.0501, 51.2501 or Series 26.) in chapter I, rather than in a residency code located in this chapter.

60.01 Dental Residency Programs. Instructional content for this group of programs is defined in codes 60.0101 – 60.0199. (*Moved from 51.28 Series*)

----- **Dentistry (DDS, D.M.D.).** (Report under 51.04 Series)

----- **Dental Clinical Sciences/Graduate Dentistry (MS, Ph.D.).** (Report under 51.05 Series)

60.0101 Dental/Oral Surgery Specialty. A residency training program that prepares dentists and medical surgeons in advanced clinical training and practice in the surgery of the oral cavity and jaws, including the removal of cancerous and other diseased tissue, removal of teeth, and reconstruction of the jaw and related facial structure. (*Moved from 51.2801*)

60.0102 Dental Public Health Specialty. A residency-training program that prepares dentists in the formulation and delivery of public preventive and curative dental health services. (*Moved from 51.2802*)

60.0103 Endodontics Specialty. A residency training program that prepares dentists in the etiology, diagnosis, prevention, and treatment of conditions that affect the dental and other periodontal tissues, including pulp canal therapy and root canal therapy. (*Moved from 51.2803*)

60.0104 Oral Pathology Specialty. A residency training program that prepares dentists in the functional and structural changes that affect the oral cavity, including diagnosis of diseases, abnormalities and tumors.

(Moved from 51.2804)

- 60.0105** **Orthodontics Specialty.** A residency training program that prepares dentists in the principles and techniques involved in the prevention and correction of dental malocclusions and oral cavity anomalies.
(Moved from 51.2805)
- 60.0106** **Pedodontics Specialty.** A residency training program that prepares dentists in the principles and techniques of diagnosing and treating the dental and other oral cavity conditions of children. *(Moved from 51.2806)*
- 60.0107** **Periodontics Specialty.** A residency training program that prepares dentists in the nature and treatment of diseases which affect the mucous membranes, gums and other soft tissues within the oral cavity.
(Moved from 51.2807)
- 60.0108** **Prosthodontics Specialty.** A residency training program that prepares dentists in the principles and techniques of constructing oral prostheses, and the restoration and maintenance of oral function by the replacement of missing teeth and other oral structures with such artificial devices.
(Moved from 51.2808)
- 60.0199** **Dental Residency Program, Other.** Any dental residency specialty program not listed above. *(Moved from 51.2899)*

60.02 **Medical Residency Programs.** Instructional content for this group of programs is defined in codes 60.0201– 60.0299. *(Moved from 51.29 Series)*

----- **Medicine (M.D.).** (Report under 51.1201)

----- **Medical Basic Sciences.** (Report under 26. Series)

----- **Medical Clinical Sciences (MS, Ph.D.).** (Report under 26. Series)

----- **Osteopathic Medicine (DO).** (Report under 51.1901)

60.0201 **Aerospace Medicine.** A residency training program that prepares physicians in the health care of operating crews and passengers of air and space vehicles, plus support personnel. Includes instruction in special conditions of physical and psychological stress, emergency medical procedures, adaptive systems and artificial environments.
(Moved from 51.2901)

60.0202 **Allergies and Immunology.** A residency training program that prepares physicians in the delivery of skilled medical care to patients suffering from allergic, asthmatic and immunologic diseases. Requires completion of a prior program in internal medicine or pediatrics.
(Moved from 51.2902)

60.0203 **Anesthesiology.** A residency training program that prepares physicians in the application of anesthesia for general and specialized surgery and obstetrics, critical patient care and the care of pain problems. Includes instruction in surgical procedures, current monitoring procedures, fluid therapy, pain management, diagnostic and therapeutic procedures outside the operating room and operating room safety. *(See also 60.0210)* *(Moved from 51.2903)*

- 60.0204** **Blood Banking.** A residency training program that prepares physicians in the medical, technical, research and administrative aspects of operating blood banks. Includes instruction in transfusion and transplantation procedures, logistics and the training and supervision of blood bank technicians. *(Moved from 51.2904)*
- 60.0205** **Cardiology.** A residency training program that prepares physicians in the natural history of cardiovascular disorders in adults and the diagnosis and treatment of diseases of the heart and blood vessels. Includes instruction in coronary care, diagnostic testing and evaluation, invasive and non-invasive therapies and pacemaker follow-up. Requires prior completion of a program in internal medicine. *(See also 60.0245)*
(Moved from 51.2905)
- 60.0206** **Chemical Pathology.** A residency training program that prepares physicians in the use and interpretation of chemical analyses, chemical diagnoses and management, and the supervision of chemical pathology laboratories. Includes instruction in basic and applied analytical chemical pathology; instrumentation data processing and chemical laboratory management. Requires prior completion of a program in medical pathology. *(Moved from 51.2906)*
- 60.0207** **Child/Pediatric Neurology.** A residency training program that prepares physicians in the diagnosis and management of neurological disorders of the newborn infant, early childhood and adolescence. Requires training in adult neurology and prior partial completion of a program in pediatrics. *(Moved from 51.2907)*
- 60.0208** **Child Psychiatry.** A residency training program that prepares physicians in the diagnosis and treatment of mental, emotional and behavioral disorders of infancy, early childhood and adolescence. Requires completion of the initial segment of a program in psychiatry. *(Moved from 51.2908)*
- 60.0209** **Colon and Rectal Surgery.** A residency training program that prepares physicians in the surgical care of patients with anorectal and colonic diseases. Also includes instruction in diagnostic and therapeutic colonoscopy. Requires prior completion of a program in general surgery. *(Moved from 51.2909)*
- 60.0210** **Critical Care Anesthesiology.** A residency training program that prepares physicians in the administration of anesthesia to patients with acute, chronic or long-term illness and who have multiple organ system derangements. Includes instruction in high-risk and trauma procedures, respiratory therapy and biomedical engineering. Requires prior completion of a program in anesthesiology. *(Moved from 51.2910)*
- 60.0211** **Critical Care Medicine.** A residency training program that prepares physicians in the management of care for patients with acutely life-threatening conditions which may include multiple organ failure. Includes instruction in the management of critical care units, emergency procedures and post-discharge care of former critical care patients. Requires prior completion of a program in internal medicine. *(Moved from 51.2911)*
- 60.0212** **Critical Care Surgery.** A residency training program that prepares physicians in surgical procedures for patients with multiple trauma, critical

illness, patients on life support and elderly or very young patients with disease complications. Requires full or partial prior completion of a program in general surgery or another surgical specialty.
(Moved from 51.2912)

- 60.0213** **Dermatology.** A residency training program that prepares physicians in the delivery of specialized care to patients with diseases of the skin, hair, nails and mucous membranes. Includes instruction in dermatologic surgical procedures, cutaneous allergies, sexually transmitted diseases, and diagnostic and therapeutic techniques.
(Moved from 51.2913)
- 60.0214** **Dermatopathology.** A residency training program that prepares physicians in the clinical and microscopic diagnosis and analysis of skin diseases and disorders. Includes instruction in laboratory administration and the supervision and training of support personnel. Requires prior completion of a program in dermatology or pathology.
(Moved from 51.2914)
- 60.0215** **Diagnostic Radiology.** A residency training program that prepares physicians in the diagnostic use of roentgen, isotopic, ultrasound and other radiant energy imaging techniques. Includes instruction in intervention procedures, safety and imaging science and technology. *(See also 60.0236, 60.0258, and 60.0259)*
(Moved from 51.2915)
- 60.0216** **Emergency Medicine.** A residency training program that prepares physicians in the methods, procedures, and techniques of providing and managing immediate health care services. Includes instruction in the initial recognition, stabilization, evaluation and care of the acutely ill or injured patient; patient follow-up and referral; management of prehospital care; training and supervision of emergency medical personnel; emergency department management; medicolegal and ethical issues; and disaster planning. *(Moved from 51.2916)*
- 60.0217** **Endocrinology and Metabolism.** A residency training program that prepares physicians in the diagnosis and treatment of diseases and disorders of the endocrine glands and metabolic system. Includes instruction in the diagnosis and care of diabetes, hypoglycemia, hormone disorders and sexual dysfunction. Requires prior completion of a program in internal medicine. *(See also 60.0246)*
(Moved from 51.2917)
- 60.0218** **Family Medicine.** A residency training program that prepares physicians in the provisions of regular and long-term care to individuals and family members. Includes instruction in comprehensive care and specialist referral, basic surgery, emergency medical procedures, and diagnostic imaging and practice management.
(Moved from 51.2918)
- 60.0219** **Forensic Pathology.** A residency training program that prepares physicians in the performance of medical autopsies, the analysis of human remains and crime scenes, and the legal follow-up and responsibilities of public pathologists. Requires prior completion of a program in pathology. *(Moved from 51.2919)*
- 60.0220** **Gastroenterology.** A residency training program that prepares physicians in the diagnosis and treatment of patients with digestive and

other gastrointestinal disorders. Includes instruction in surgical procedures, cancer of the digestive system, nutrition and malnutrition and counseling the behavioral adjustment of patients with chronic problems. Requires prior completion of a program in internal medicine.
(Moved from 51.2920)

60.0221 **General Surgery.** A residency training program that prepares physicians in the care and treatment of diseases and disorders via invasive procedures and the etiology, pathogenesis, diagnosis and management of physical disorders. Includes instruction in clinical and operative skills, pre-operative and post-operative care, trauma management and endoscopic techniques. (See also 60.0212, 60.0223, 60.0233, 60.0242, 60.0250, 60.0253, 60.0262, and 60.0264)
(Moved from 51.2921)

60.0222 **Geriatric Medicine.** A residency training program that prepares physicians in the care and management of elderly patients in acute, ambulatory, community and long-term care settings, and the treatment of diseases and conditions associated with the aging process. Includes instruction in ethical and legal issues, behavioral aspects of illness, socioeconomic factors in care and rehabilitation therapies. Requires prior completion of a program in family medicine or internal medicine.
(See also 60.0269) (Moved from 51.2922)

60.0223 **Hand Surgery.** A residency training program that prepares physicians in the investigation, preservation and restoration by medical, surgical or physical methods of all structures of the upper extremity which directly affect the form and function of the limb, wrist and hand. Requires prior completion of a program in orthopedic surgery, plastic surgery or general surgery.
(Moved from 51.2923)

60.0224 **Hematology.** A residency training program that prepares physicians in the mechanisms and therapy of diseases of the blood, including patient management, diagnostic tests, biopsies and other procedures. Requires prior completion of a program in internal medicine.
(Moved from 51.2924)

60.0225 **Hematological Pathology.** A residency training program that prepares physicians in the laboratory and analytical procedures for studying all facets of hematologic and coagulation disorders. Includes instruction in the management of hematology laboratories. Requires prior completion of a program in pathology.
(Moved from 51.2925)

60.0226 **Immunopathology.** A residency training program that prepares physicians in the diagnosis, treatment and laboratory management of immunologic diseases. Includes instruction in diagnostic surgical pathology, management of organ transplantation and immunotherapy. Requires prior completion of a program in pathology.
(Moved from 51.2926)

60.0227 **Infectious Disease.** A residency training program that prepares physicians in the natural history, prevention and treatment of major infectious diseases, including sexually transmitted diseases, and the long-term management of patients. Includes instruction in epidemiology, identification and specimen collection techniques, and quality assurance and cost containment. Requires prior completion of a program in internal medicine.
(Moved from 51.2927)

- 60.0228 Internal Medicine.** A residency training program that prepares physicians in the provision of general medical services to adult patients with a wide range of non-surgical clinical problems. Includes instruction in behavioral aspects of diseases, patient and family counseling and practice management. *(Moved from 51.2928)*
- 60.0229 Laboratory Medicine.** A residency training program that prepares physicians in the principles and practices of applied medical research and related techniques, equipment, data systems and research design. Includes instruction in the management of medical laboratories in research and health care facilities. *(Moved from 51.2929)*
- 60.0230 Musculoskeletal Oncology.** A residency training program that prepares physicians in the diagnosis and treatment of musculoskeletal neoplasm, and the application of cancer therapy regimes. *(Moved from 51.2930)*
- 60.0231 Neonatal-Perinatal Medicine.** A residency training program that prepares physicians in the physiology of the normal neonate, the pathophysiology of the sick infant and the diagnosis and management of problems of the newborn infant. Requires prior completion of a program in pediatrics and obstetrics. *(Moved from 51.2931)*
- 60.0232 Nephrology.** A residency training program that prepares physicians in the pathogenesis, natural history and management of congenital and acquired diseases of the kidney and urinary tract and renal diseases associated with systemic disorders. Includes instruction in organ transplantation and dialysis therapy. Requires prior completion of a program in internal medicine. *(See also 60.0248)*
(Moved from 51.2932)
- 60.0233 Neurological Surgery/Neurosurgery.** A residency training program that prepare physicians in the diagnosis, evaluation and treatment of disorders of the central, peripheral and autonomic nervous systems, including their supporting systems and vascular supply; and the evaluation and treatment of pathological processes which modify function or activity of the nervous system, including the hypophysis. Includes instruction in critical care management and rehabilitation. Requires prior partial completion of a program in general surgery and another surgical specialty. *(Moved from 51.2933)*
- 60.0234 Neurology.** A residency training program that prepares physicians in the diagnosis and non-surgical treatment of diseases and abnormalities affecting the nervous system and nerve tissue in adults. Requires prior partial completion of a program in internal medicine. *(See also 60.0207)*
(Moved from 51.2934)
- 60.0235 Neuropathology.** A residency training program that prepares physicians in the laboratory analysis of nerve tissues and the clinical diagnosis of neurological and neuromuscular diseases. Includes instruction in nerve biopsies and necropsies. Requires prior completion of a program in pathology. *(Moved from 51.2935)*
- 60.0236 Nuclear Medicine.** A residency training program that prepares physicians in the diagnostic, therapeutic and investigational use of radionuclides. Includes instruction in imaging and non-imaging technologies and the design and development instrumentation,

procedures and pharmaceutical. Requires prior partial completion of a program in radiology, pathology or internal medicine.
(Moved from 51.2936)

- 60.0237** **Nuclear Radiology.** A residency training program that prepares physicians in the imaging by external detection of radionuclides and/or biodistribution by external detection of radionuclides for diagnosis of disease. Requires prior partial completion of a program in diagnostic radiology. (Moved from 51.2937)
- 60.0238** **Obstetrics and Gynecology.** A residency training program that prepares physicians in the diagnosis, prevention and treatment of diseases of women, especially those affecting the reproductive system, and the comprehensive care and treatment of women before, during and after childbirth. (Moved from 51.2938)
- 60.0239** **Occupational Medicine.** A residency training program that prepares physicians in the maintenance of the health of workers, the ability to perform work, the arrangements of work, and the physical and chemical environments of the workplace. Includes instruction in data collection and management and the administration and regulation of occupational medical services. (Moved from 51.2939)
- 60.0240** **Oncology.** A residency training program that prepares physicians in the etiology, epidemiology, diagnosis, treatment and therapeutic management of cancers and related clinical neoplastic diseases. Includes instruction in rehabilitation, supportive care and the administration of tumor boards. Requires prior completion of a program in internal medicine. (See also 60.0230, 60.0247 and 60.0258)
(Moved from 51.2940)
- 60.0241** **Ophthalmology.** A residency training program that prepares physicians in the diagnosis, prevention treatment of ophthalmic diseases and disorders, and ocular pathology procedures. Includes instruction in eye surgery. (Moved from 51.2941)
- 60.0242** **Orthopedics/Orthopedic Surgery.** A residency training program that prepares physicians in the investigation, preservation, and restoration of the form and function of the extremities, spine and associated structures by medical, surgical and physical methods. Requires prior partial completion of a program in general surgery, internal medicine or pediatrics. (See also 60.0249) (Moved from 51.2942)
- 60.0243** **Otolaryngology.** A residency training program that prepares physicians in the recognition and medical management of diseases, congenital anomalies, disorders and traumas of the head and neck, the air and food passages, and the organs of hearing and speech. Includes instruction in regional surgery. Requires prior partial completion of a program in general surgery. (Moved from 51.2943)
- 60.0244** **Pathology.** A residency training program that prepares physicians in the clinical laboratory analysis and diagnosis of disease and anatomic abnormalities. Includes instruction in performing general autopsies, forensic medicine, laboratory management and quality control. (See also 60.0204, 60.0214, 60.0219, 60.0225, 60.0235 and 60.0259)
(Moved from 51.2944)

- 60.0245** **Pediatric Cardiology.** A residency training program that prepares physicians in the diagnosis and management of diseases and disorders of the cardiovascular and cardiopulmonary systems of infants, children and adolescents. Includes instruction in related public health and community medicine issues. Requires prior completion of a program in pediatrics. *(Moved from 51.2945)*
- 60.0246** **Pediatric Endocrinology.** A residency training program that prepares physicians in the diagnosis and management of endocrine diseases and the regulation of hormone balance in childhood and adolescence. Requires prior completion of a program in pediatrics. *(Moved from 51.2946)*
- 60.0247** **Pediatric Hemato-Oncology.** A residency training program that prepares physicians in the diagnosis and management of hematologic disorders and malignant diseases, including blood and bone marrow function, in infancy, childhood and adolescence. Requires prior completion of a program in pediatrics. *(Moved from 51.2947)*
- 60.0248** **Pediatric Nephrology.** A residency training program that prepares physicians in the diagnosis and management of infants, children and adolescents with renal and genito-urinary problems, hypertension and disorders of body fluid physiology. Requires prior completion of a program in pediatrics. *(Moved from 51.2948)*
- 60.0249** **Pediatric Orthopedics.** A residency training program that prepares physicians in the diagnosis, surgical and non-surgical treatment, and management of musculoskeletal diseases, abnormalities and trauma in infants, children and adolescents. Requires prior completion of a program in orthopedic surgery. *(Moved from 51.2949)*
- 60.0250** **Pediatric Surgery.** A residency training program that prepares physicians in the diagnosis, evaluation and surgical treatment of diseases, disorders and trauma in infants and children. Requires prior completion of a program in general surgery. *(Moved from 51.2950)*
- 60.0251** **Pediatrics.** A residency training program that prepares physicians in the comprehensive care and treatment of all aspects of human growth and development from conception through fetal life, infancy, childhood and adolescence, including preventive and therapeutic regimes. Includes instruction in behavioral aspects of illness, related family and community medicine issues, and emergency and critical care procedures. *(See also 60.0245, 60.0246, 60.0247, 60.0248, 60.0249 and 60.0250)*
(Moved from 51.2951)
- 60.0252** **Physical and Rehabilitation Medicine.** A residency training program that prepares physicians in the diagnosis, etiology, treatment, prevention and rehabilitation of neuromusculo-skeletal, cardiovascular, pulmonary and other system disorders common to patients of both sexes and all ages. Includes instruction in physical examinations, design and prescription of rehabilitation strategies and the supervision of rehabilitation teams. *(Moved from 51.2952)*
- 60.0253** **Plastic Surgery.** A residency training program that prepares physicians in the repair, replacement and reconstruction of defects of form and function of the integument and its underlying musculoskeletal system,

with emphasis on the craniofacial structures, the oropharynx, the hand, the breast and the external genitalia. Includes instruction in aesthetic as well as reconstructive surgery. Requires prior completion of a program in general surgery. (*Moved from 51.2953*)

- 60.0254** **Preventive Medicine.** A residency training program that prepares individuals to manage the study and prevention of disease processes occurring in communities and defined population groups and the promotion of health-enhancing environments and behaviors. Includes instruction in biostatistics; epidemiology; health program planning; evaluation of behavioral outcomes and medical care; recognition, assessment, and control of environmental hazards, occupational health and safety; socio-cultural behavioral factors in medicine; prevention application, and assessment of population and individual health needs. (*Moved from 51.2954*)
- 60.0255** **Psychiatry.** A residency training program that prepares physicians in the diagnosis, treatment, and prevention of mental, emotional, behavioral and neurological disorders. Includes instruction in psychotherapy, family counseling, referral, clinical diagnosis, and practice management. Requires prior partial completion of a program in neurology and internal medicine, family medicine or pediatrics. (*Moved from 51.2955*)
- 60.0256** **Public Health Medicine.** A residency training program that prepares physicians in the prevention, control and treatment of communicable and chronic diseases in communities and defined population groups, with emphasis on the administrative management of health care, sanitation and applied research services. (*Moved from 51.2956*)
- 60.0257** **Pulmonary Disease.** A residency training program that prepares physicians in pulmonary physiology and the treatment of lung diseases, pulmonary malignancies, related vascular diseases, respiratory disorders, diagnostic and therapeutic procedures, and pulmonary pathology. Requires prior completion of a program in internal medicine. (*Moved from 51.2957*)
- 60.0258** **Radiation Oncology.** A residency training program that prepares physicians in the use of ionizing radiation to treat patients with cancer and other diseases. Includes instruction in treatment planning, instrument design and operation, radiation physics and radiobiology. (*Moved from 51.2958*)
- 60.0259** **Radioisotopic Pathology.** A residency training program that prepares physicians in the use of radionuclides in the study of body fluids, excreta, or tissues quantified outside the body. Includes instruction in laboratory management and safety, quality control, instrumentation, isotope storage and in vitro analyses. Require prior completion of a program in pathology. (*Moved from 51.2959*)
- 60.0260** **Rheumatology.** A residency training program that prepares physicians in the diagnosis and treatment of patients with acute and chronic rheumatic diseases, diffuse connective tissue diseases, systemic and metabolic diseases and infections and complications following surgery. Requires prior completion of a program in internal medicine. (*Moved from 51.2960*)

- 60.0261** **Sports Medicine.** A residency training program that prepares physicians in the pathology and biomechanics of athletic injuries and the effects of injury on the athlete, including both physical and psychological manifestations. Includes instruction in acute and chronic patient supervision, therapy and rehabilitation, and diagnostic procedures. Requires prior completion of a program in orthopedic surgery.
(Moved from 51.2961)
- 60.0262** **Thoracic Surgery.** A residency training program that prepares physicians in the evaluation and surgical treatment of pulmonary, esophageal, mediastinal, chest wall, diaphragmatic and cardiovascular disorders. Includes instruction in bronchoscopy and esophagoscopy. Requires prior completion of a program in general surgery.
(Moved from 51.2962)
- 60.0263** **Urology.** A residency training program that prepares physicians in the diagnosis and treatment of diseases of the genitourinary tract in men and women, including renal transplantation, renal-vascular disease, oncology, infertility and endocrinology, stone disease and aerodynamics. Requires prior partial completion of a program in general surgery.
(Moved from 51.2963)
- 60.0264** **Vascular Surgery.** A residency training program that prepares physicians in the surgical treatment of diseases and disorders of the arterial, venous and lymphatic circulatory systems and of the heart and thoracic aorta. Requires prior completion of all or a portion of a program in general surgery. *(Moved from 51.2964)*
- 60.0265** **Adult Reconstructive Orthopedics (Orthopedic Surgery). (NEW)**
A residency training program that prepares individuals to undertake the study, prevention, and reconstructive treatment of musculoskeletal diseases, disorders, and sequelae of injuries by medical, physical, and surgical methods. Includes instruction in arthritis and related disorders of the hip, knee, shoulder, elbow, ankle, and foot.
- 60.0266** **Child Neurology. (NEW)** A residency training program that prepares individuals to study, prevent, and manage neurological disorders of children including disorders requiring surgical, medical, and psychiatric management. Includes instruction in neurophysiology; neuropathology; neuroradiology; neuro-ophthalmology; psychiatry; rehabilitation; neurological surgery; pediatric neurodevelopment; and psycho-social support and counseling.
- 60.0267** **Cytopathology. (NEW)** A residency training program that prepares individuals to study, prevent, and manage human diseases manifested in cells. Includes instruction in laboratory procedures; laboratory management; quality assurance; screening; specimen collection; cytopreparation; cytometric and image analysis; and related immunological and molecular techniques.
- 60.0268** **Geriatric Medicine (Internal Medicine). (NEW)** A residency training program that prepares individuals to manage the health care of elderly patients with a variety of medical problems on an in-patient and out-patient basis. Includes instruction in the physiology of aging; geriatric pathophysiology; atypical presentation of illness; functional assessment; cognitive and affective assessment; and concepts of patient treatment and management in different settings. *(See also 60.0222)*

- 60.0269** **Pediatric Urology. (NEW)** A residency training program that prepares individuals in the study, prevention, and management of congenital, childhood-acquired, and overlapping adolescent anomalies; problems, diseases, tumors, and traumas of the urologic system. Includes instruction in diagnostic and therapeutic procedures; urologic surgery; pediatric urologic disease; urodynamic analysis; nephrologic disease; neonatal and intensive care; neuropathic bladder entities; neurological tumors and trauma; renal genital anomalies; sexual development; and patient counseling and management.
- 60.0270** **Physical Medicine and Rehabilitation/Psychiatry. (NEW)** A residency training program that prepares individuals to diagnose, evaluate, and treat patients with limited physical, psychological, social, and vocational functions as a consequence of diseases, injuries, impairments, and/or disabilities. Includes instruction in pathogenesis of systems disorders; psychiatric examination; therapeutic exercises and physical modalities; prosthetics, orthotics and other durable rehabilitative equipment; gait analysis; diagnostic and therapeutic injections; electrodiagnostic analysis; and rehabilitation management.
- 60.0271** **Orthopedic Surgery of the Spine. (NEW)** A residency training program that prepares individuals for the study, prevention and treatment of spinal column disease, disorders, and injuries by medical, physical and surgical methods. Includes instruction in pathogenesis and diagnosis of clinical disorders of the spine; non-operative treatment modalities; invasive modalities; basic sciences related to the musculoskeletal system; spinal degeneration; spinal neurologic function; pre- and post-operative management; and patient evaluation.
- 60.0299** **Medical Residency Programs, Other.** Any medical residency program that listed above. *(Moved from 51.2999)*
- 60.03** **Veterinary Residency Programs.** Instructional content for this group of programs is defined in codes 60.0301 – 60.0399. *(Moved from 51.30 Series)*
- **Veterinary Medicine (D.V.M.).** (Report under 51.2401)
- 60.0301** **Veterinary Anesthesiology.** A residency training program that prepares veterinarians in the application of anesthesia for general and specialized surgery and obstetrics, critical animal care and the care of pain problems. Includes instruction in surgical procedures, current monitoring procedures, fluid therapy, pain management, diagnostic and therapeutic procedures outside the operating room, and operating room safety. *(Moved from 51.3001)*
- 60.0302** **Veterinary Dentistry.** A residency training program that prepares veterinarians in the application of dental care procedures to the teeth, eating surfaces, and oral cavities of animals. Includes instruction in the prevention, diagnosis, and treatment of diseases and abnormalities of animal teeth and gums and related parts of the oral cavity; and related anatomical and physiological principles. *(Moved from 51.3002)*

- 60.0303** **Veterinary Dermatology.** A residency training program that prepares veterinarians in the delivery of specialized care to animals with diseases of the skin, scales, feathers, hair, nails and mucous membranes. Includes instruction in dermatologic surgical procedures, cutaneous allergies, and diagnostic and therapeutic techniques. (Moved from 51.3003)
- 60.0304** **Veterinary Emergency and Critical Care Medicine.** A residency training program that prepares veterinarians in the emergency treatment and management of care for animals with acutely life-threatening conditions which may include multiple organ failure. Includes instruction in the management of critical care units, emergency procedures, and long-term care of critically diseased animals. (Moved from 51.3004)
- 60.0305** **Veterinary Internal Medicine.** A residency training program that prepares veterinarians in the provision of general medical services to animals with a wide range of non-surgical clinical problems. Includes instruction in behavioral aspects of diseases, animal diagnosis, animal aging, and referral procedures. (Moved from 51.3005)
- 60.0306** **Laboratory Animal Medicine.** A residency training program that prepares veterinarians in the principles and practices of applied veterinary research and related techniques, equipment, data systems and research design. Includes instruction in the management of veterinary and other animal research laboratories and health care facilities. (Moved from 51.3006)
- 60.0307** **Veterinary Microbiology.** A residency training program that prepares veterinarians in clinical applications of research on harmful microorganisms, including viruses, and of the disease processes they induce in animals. (Moved from 51.3007)
- 60.0308** **Veterinary Nutrition.** A residency training program that prepares veterinarians to apply research on the chemical nature of food substances; the processes by which animals ingest, digest, absorb, transport, utilize and excrete food and nutrients; and their relation to animal behavior and health. (Moved from 51.3008)
- 60.0309** **Veterinary Ophthalmology.** A residency training program that prepares veterinarians in the diagnosis, prevention, and treatment of ophthalmic diseases and disorders in animals, and related ocular pathology procedures. Includes instruction in animal eye surgery. (Moved from 51.3009)
- 60.0310** **Veterinary Pathology.** A residency training program that prepares veterinarians in the clinical laboratory analysis and diagnosis of diseased animal tissues and anatomic abnormalities. Includes instruction in performing general autopsies, forensic medicine, laboratory management and quality control. (Moved from 51.3010)
- 60.0311** **Veterinary Practice.** A residency training program that prepares veterinarians in the provision of regular and long-term care to animals, health services to owners, and the management of independent veterinary practices. Includes instruction in comprehensive care and specialist referral, basic surgery, emergency medical procedures, and diagnostic imaging. (Moved from 51.3011)

- 60.0312** **Veterinary Preventive Medicine.** A residency training program that prepares veterinarians in the investigation of and intervention in health and disease problems of animal and related human communities; comparative medicine; and animal public health. Includes instruction in biostatistics, epidemiology, environmental control, toxicology and the planning and administration of animal health programs and services. *(Moved from 51.3012)*
- 60.0313** **Veterinary Radiology.** A residency training program that prepares veterinarians in the use of radiologic imaging and therapies to diagnose and treat animal diseases and health problems. Includes instruction in the use and handling of equipment for radionuclides detection and application. *(Moved from 51.3013)*
- 60.0314** **Veterinary Surgery.** A residency training program that prepares veterinarians in the care and treatment of animal diseases and disorders via invasive procedures and the etiology, pathogenesis, diagnosis and management of physical disorders. Includes instruction in clinical and operative skills, pre-operative and post-operative care, trauma management, endoscopic techniques, and applications to large and small animal medicine. *(Moved from 51.3014)*
- 60.0315** **Theriogenology.** A residency training program that prepares veterinarians in the diagnosis, prevention and treatment of diseases and health problems affecting the reproductive systems of animals, and the comprehensive care and treatment of parent animals, animal fetuses and newborn or newly hatched animals throughout the gestation period. *(Moved from 51.3015)*
- 60.0316** **Veterinary Toxicology.** A residency training program that prepares veterinarians in the clinical application of research on the nature and extent of adverse effects of synthetic and naturally occurring chemical substances on animals. Includes instruction in chemical mechanisms and the specialties of reproductive, developmental, genetic, forensic, inhalation and neurobehavioral toxicology. *(Moved from 51.3016)*
- 60.0317** **Zoological Medicine.** A residency training program that prepares veterinarians in the specialized treatment and care of zoo animals, performing animals, and animals living in the wild. Includes instruction in the principles and procedures used in the observation, diagnosis, care and treatment of illness, disease, injury, deformity, or other anomalies in non-domesticated animals. *(Moved from 51.3017)*
- 60.0399** **Veterinary Residency Programs, Other.** Any residency training program in veterinary medicine not listed above. *(Moved from 51.3099)*

CHAPTER III

TECHNOLOGY EDUCATION/INDUSTRIAL ARTS PROGRAMS

Programs in this series are taught primarily at the secondary school levels. **They are not offered at the postsecondary level and should not be used to report or reflect program activity at the postsecondary level.** The programs are intended to improve students' understanding of and appreciation for industrial processes and related technologies.

- 21. TECHNOLOGY EDUCATION/INDUSTRIAL ARTS.** Instructional programs that provide individuals with knowledge, learning experiences and competencies pertaining to aspects of industry and technology. The programs are also designed to assist individuals in making informed occupational choices and provide preparation for entry into occupational training or education programs.

21.01 Technology Education/Industrial Arts Programs. Instructional content is defined in code 21.0101.

21.0101 Technology Education/Industrial Arts. An instructional program that focuses on the technological concepts, processes and systems, such as: the evolution, utilization and significance of technology as related to industry; and its organization, personnel, systems, techniques, resources and products. Includes instruction in technological literacy, basic applied science, specific technologies and their applications, and related methods of research and experimentation.

----- **Technology Teacher Education/Industrial Arts.** (Report under 13.1309)

CHAPTER IV

RESERVE OFFICER TRAINING CORPS PROGRAMS

Series 28. refers to instructional programs sponsored and regulated by the U.S. Department of Defense and the Army, Navy/Marine Corps, and Air Force. Junior ROTC programs introduce secondary students to military careers, and senior ROTC programs prepare postsecondary students for entry into the armed services as commissioned reserve or active duty officers. **Such programs may carry limited academic credit and are completed in addition to a regular course of study, but they are not counted as major concentrations and do not result in the award of degrees, certificates, or diplomas.** Military awards received for completing JROTC or ROTC programs, such as officer's commissions, are not recorded as educational program completions. Persons completing JROTC programs receive a high school diploma and persons completing ROTC programs receive a college degree with an academic major or majors.

- 28. RESERVE OFFICER TRAINING CORPS (JROTC, ROTC).** Instructional programs that prepare secondary students as officer cadets and postsecondary students as commissioned officers in the U.S. armed forces.

28.01 Air Force JROTC/ROTC. Instructional content is defined in code 28.0101.

28.0101 Air Force JROTC/ROTC. A program that introduces students to the theory and practice of air science, life in the U.S. Air Force, and prepares

them for cadet status (Junior ROTC or JROTC) or for service as commissioned reserve or active duty officers (senior AFROTC or ROTC). Programs are offered as adjuncts to regular high school or college instructional programs.

28.03 Army JROTC/ROTC. Instructional content is defined in code 28.0301.

28.0301 Army JROTC/ROTC. A program that introduces students to the theory and practice of military science, life in the U.S. Army, and prepares them for cadet status (Junior ROTC or JROTC) or for service as commissioned reserve or active duty officers (senior AROTC or ROTC). Programs are offered as adjuncts to regular high school or college instructional programs.

28.04 Navy/Marine Corps JROTC/ROTC. Instructional content is defined in code 28.0401.

28.0401 Navy/Marine Corps JROTC/ROTC. A program that introduces students to the theory and practice of naval science, life in the U.S. Navy and/or Marine Corps, and prepares them for cadet status (Junior ROTC or JROTC) or for service as commissioned reserve or active duty officers (senior NROTC or ROTC). Programs are offered as adjuncts to regular high school or college instructional programs.

CHAPTER V

PERSONAL IMPROVEMENT AND LEISURE PROGRAMS

The programs in Series 32., 33., 34., 35., 36. and 37. equip individuals with knowledge and skills related to personal growth and leisure-time pursuits. Most of the programs are designed for adult learners. They are not formal academic or occupationally-specific programs and do not result in transferable credit. Awards and completions in these programs are usually informal. The codes and series for these programs are included in this chapter to avoid potential confusion with codes in Series 31. of chapter I.

32. BASIC SKILLS. Instructional programs that focus on the fundamental knowledge and skills that individuals need to function productively in society.

32.01 Basic Skills. Instructional content for this group of programs is defined in codes 32.0101– 32.0199.

32.0101 Basic Skills, General. A general program that focuses on the fundamental knowledge and skills that individuals need to function productively in society.

32.0104 Numeracy and Computational Skills. A program that focuses on the development of computing and other mathematical reasoning abilities and skills.

32.0105 Job-Seeking/Changing Skills. A program that focuses on the development of skills related to job searches and self-marketing. Includes instruction in assessing one's own capabilities and skills; filling out an application; and handling an interview.

32.0107 Career Exploration/Awareness Skills. A program that focuses on the linkage between individual capabilities and needs and the job market.

Includes instruction in the variety and scope of available employment, how to access job information, and techniques of self-analysis.

32.0108 Literacy and Communication Skills. A program that focuses on the fundamental knowledge and skills in reading, writing and speaking that individuals need to function productively in society.

32.0109 Second Language Learning. (NEW) A program that focuses on the development of proficiency in reading, writing, and speaking a language or languages other than the mother tongue, that are needed to perform day-to-day tasks. Includes instruction in the use of basic communication skills to develop and transmit ideas and thoughts.

32.0199 Basic Skills, Other. Any instructional program in basic skills not listed above.

33. CITIZENSHIP ACTIVITIES. Instructional programs that prepare individuals for citizenship, and provide instruction in how citizens may engage in civic activities.

33.01 Citizenship Activities. Instructional content for this group of programs is defined in codes 33.0101– 33.0199.

33.0101 Citizenship Activities, General. A program that generally prepares individuals for citizenship, and focuses on how citizens may engage in civic activities.

33.0102 American Citizenship Education. A program that prepares individuals to take the oath of United States citizenship and to exercise the attendant rights and responsibilities of citizenship.

33.0103 Community Awareness. A program that focuses on local government and history, current issues, and focuses on how individuals can keep abreast of important issues that may affect them.

33.0104 Community Involvement. A program that focuses on how individuals may become actively involved in the social, economic and political issues and events affecting them; and the roles and methods that are available to influence community life and public policy.

33.0105 Canadian Citizenship Education. (NEW) A program that prepares individuals to take the oath of Canadian citizenship and to exercise the attendant rights and responsibilities of citizenship.

33.0199 Citizenship Activities, Other. Any instructional program in citizenship activities not listed above.

34. HEALTH-RELATED KNOWLEDGE AND SKILLS. Instructional program that focus on the promotion of personal and family health.

34.01 Health-Related Knowledge and Skills. Instructional content for this group of programs is defined in codes 34.0102 - 34.0199.

34.0102 Birthing and Parenting Knowledge and Skills. A program that focuses on all facets of the mother's and father's roles in family planning,

prenatal preparation and care, the birthing experience, post-natal care and the raising of children.

34.0103 Personal Health Improvement and Maintenance. A program that focuses on the principles, techniques, and methods by which individuals can maintain or improve their overall physical and emotional well-being, as well as work on specific areas of personal health.

34.0104 Addiction Prevention and Treatment. A program that focuses on how individuals can avoid addictive substances and behaviors; the methods by which individuals can be treated for various addictions and related behavior problems; and the knowledge and coping skills needed by relatives and associates of addicted individuals.

34.0199 Health-Related Knowledge and Skills, Other. Any instructional program in health-related knowledge and skills not listed above.

35. INTERPERSONAL AND SOCIAL SKILLS. Programs that focus on the development of methods and skills for effective interactions with others in a variety of settings (private, social, and business settings).

35.01 Interpersonal and Social Skills. Instructional content for this group of programs is defined in codes 35.0101– 35.0199.

35.0101 Interpersonal and Social Skills, General. A general program that focuses on how to effectively interact with others in private, social and business settings.

35.0102 Interpersonal Relationships Skills. A program that focuses on how to increase one's ability to establish and maintain mutually satisfactory ties with other human beings.

35.0103 Business and Social Skills. A program that focuses on how to increase one's ability to function effectively in social and business settings where interpersonal communication is required.

35.0199 Interpersonal Social Skills, Other. Any instructional program in interpersonal social skills not listed above.

36. LEISURE AND RECREATIONAL ACTIVITIES. Programs that focus on the development of an appreciation for and competency in recreational and leisure-related activities.

36.01 Leisure and Recreational Activities. Instructional content for this group of programs is defined in codes 36.0101– 36.0199.

36.0101 Leisure and Recreational Activities, General. A general program that focuses on the development of an appreciation for and competency in recreational and leisure-related activities.

36.0102 Handicrafts and Model-Making. A program that focuses on the fashioning of objects of decoration, utility or representation from various materials, including related matters of research, tool use and appreciation.

36.0103 Board, Card and Role-Playing Games. A program that focuses on the rules and techniques of participation and skill-building in competitive

activities of skill or chance, such as board games, card games or role-playing activities.

- 36.0105 Home Maintenance and Improvement.** A program that focuses on the knowledge and skills associated with maintaining living space and related equipment and furnishings, as well as do-it-yourself repairs and improvement projects of varying complexity.
- 36.0106 Nature Appreciation.** A program that focuses on how to increase one's understanding and knowledge of the natural environment in which we live, as well as techniques of wildlife observation and management.
- 36.0107 Pet Ownership and Care.** A program that focuses on how to increase one's ability to care for domesticated animals kept for pleasure or work.
- 36.0108 Sports and Exercise.** A program that focuses on the rules and techniques of participation and skill building in competitive physical activities, as well as non-competitive physical fitness programs.
- 36.0109 Travel and Exploration.** A program that focuses on particular geographic areas or phenomena, and provides opportunities for organized trips or tours, including related knowledge and skills.
- 36.0110 Art.** A program that focuses on the techniques and methods of creative self-expression in visual or plastic media, such as painting or sculpture.
- 36.0111 Collecting.** A program that focuses on the knowledge and techniques necessary for acquiring and maintaining personal collections of objects, such as autographs, stamps, models, specimens, vehicles and antiques.
- 36.0112 Cooking and Other Domestic Skills.** A program that focuses on the knowledge and skills related to food buying and preparation, home decoration, sewing and other domestic activities, either as hobbies or as routine tasks.
- 36.0113 Computer Games and Programming Skills.** A program that focuses on the knowledge and skills associated with creating, acquiring, maintaining and using computer hardware and software, as well as the playing of computer-based games.
- 36.0114 Dancing.** A program that focuses on the knowledge and skills related to recreational dance, such as square dancing, ballroom dancing, classical or modern dance.
- 36.0115 Music.** A program that focuses on the knowledge and skills associated with personal music appreciation, the playing of a musical instrument, singing or recreational composition.
- 36.0116 Reading.** A program that focuses on the activity of reading for pleasures, either alone or as part of a group experience.
- 36.0117 Theatre/Theater.** A program that focuses on the knowledge and skills associated with participation in amateur theatrical productions, drama appreciation, and writing amateur plays.
- 36.0118 Writing.** A program that focuses on the knowledge and skills related to creative writing and poetry composition for pleasure or profit, including methods of publication.

36.0119 Aircraft Pilot (Private). A program that prepares individuals to fly aircraft for personal use, and qualifies individuals to sit for the FAA pilot's license examination. Includes instruction in principles of aircraft design and performance; aircraft flight systems and controls; flight crew operations and procedures; radio communications and navigation procedures and systems; airways safety and traffic regulations; and governmental rules and regulations pertaining to piloting aircraft.
(Moved from 49.0107)

36.0199 Leisure and Recreational Activities, Other. Any instructional program in leisure and recreational activities not listed above.

37. PERSONAL AWARENESS AND SELF-IMPROVEMENT. Programs that focus on the development of improved self-awareness, avoidance of stressful behavior, and improved decision-making skills.

37.01 Personal Awareness and Self-Improvement. Instructional content for this group of programs is defined in codes 37.0101- 37.0199.

37.0101 Self-Awareness and Personal Assessment. A program that focuses on the knowledge and skills useful in becoming aware of one's feelings, using methods of assessing one's personal attributes, and being aware of how one is perceived by others.

37.0102 Stress Management and Coping Skills. A program that focuses on the knowledge and skills useful in avoiding stressful situations and managing them when they occur, including dealing with complex and long-term stressful relationships.

37.0103 Personal Decision-Making Skills. A program that focuses on how to develop individuals' abilities to assess decisions affecting their lives and to make life choices consistent with needs and beliefs.

37.0104 Self-Esteem and Values Clarification. A program that focuses on the development of personal philosophies and ideas of positive self-concept and self-worth, and applying these knowledge and skills in everyday circumstances.

37.0199 Personal Awareness and Self-Improvement, Other. Any instructional program in personnel awareness and self-improvement not listed above.

CHAPTER VI

HIGH SCHOOL/SECONDARY DIPLOMAS AND CERTIFICATE PROGRAMS

The CIP codes in this chapter define formal instructional programs at the high school level only. Data on high school completions and awards are collected and analyzed annually by the United States Department of Education. High school/secondary awards that do not reflect completion of an instructional program (such as Certificates of Attendance) are not included in the CIP taxonomy.

Regular high school diplomas, regardless of type, represent the successful completion of 16 or more prescribed Carnegie Units of instruction. (Each Carnegie Unit equals one academic year of instruction in a specific subject matter area, at approximately one instructional hour per school day.)

Depending on state policy, secondary students enrolled in vocational and other programs may receive more than one completion award. In states offering separate vocational diplomas, individuals receiving recognized vocational diplomas will also have completed a regular secondary academic program, and will be simultaneously certified in both. Other states do not offer a separate secondary vocational diploma, but offer either a certificate of completion in specified vocational programs or program areas, or make no distinction at all.

Proficiency in specific academic subject matter areas is also certified in some states by the simultaneous award of a regular secondary diploma and certification of competence in one or more specific programs or program areas. Other states award separate college preparatory diplomas to those students completing specified credits in academic subjects. In addition, a few states award honors or regents diplomas that certify outstanding scholastic performance in either academic or vocational programs.

State policy also determines the treatment of completions and awards in the area of special education. Under the authority of PL 94-142, all handicapped students in the United States under age 21 must have an Individualized Education Plan (IEP), which specifies the knowledge and skills that the student is expected to achieve. Some states implement this national requirement by awarding a regular secondary diploma to students who successfully complete their IEP requirements, without regard to the standard Carnegie Unit requirements of such diplomas. Other states award certificates of IEP completion along with attendance certificates, but not diplomas. Still others do not formally recognize IEP completions, and do not separately distinguish special education students receiving any kind of award.

It is also possible to be certified to have met diploma requirements without having attended a traditional or recognized secondary school, or having completed a program, either by examination or by official acceptance of credentials earned outside the United States.

- 53. HIGH SCHOOL/SECONDARY DIPLOMAS AND CERTIFICATES.** Instructional programs that define the prescribed requirements for high school/secondary school graduation.

- 53.01 High School/Secondary Diploma Programs.** Instructional content for this group of programs is defined in codes 53.0101 – 53.0199.

- 53.0101 Regular/General High School/Secondary Diploma Program.** An instructional program that defines the prescribed minimum requirements specified by a state, province, or other jurisdiction for completion of, and graduation from an undifferentiated regular secondary school program representing 12 academic years of schooling intended for school-age students.

- 53.0102 College/University Preparatory and Advanced High School/Secondary Diploma Program.** An instructional program that defines the prescribed requirements, specified by a state, province, or other jurisdiction, for completion of, and graduation from, a secondary school program of academic subject matter designed to meet typical college and university entrance requirements.
- 53.0103 Vocational High School and Secondary Business/Vocational-Industrial/Occupational Diploma Program.** An instructional program that defines the prescribed requirements, specified by a state or other jurisdiction, for high school/secondary school graduation in a vocational program -- together with other required subject matter, and that may prepare individuals for specific occupations or direct labor market entry.
- 53.0104 Honors/Regents High School/Secondary Diploma Program.** An instructional program that defines the prescribed requirements, specified by a state, province, or other jurisdiction for high school/secondary school graduation in an academic or vocational program at a prescribed level of outstanding scholastic performance, or via meeting special requirements beyond the minimum.
- 53.0105 Adult High School/Secondary Diploma Program (NEW).** An instructional program that defines the prescribed requirements, specified by a state, province, or other jurisdiction for the completion of, and graduation from a secondary school program of academic subject matter offered for adult learners outside of the regular secondary school program. This does not include adult compensatory education programs resulting in completion of a high school equivalency certificate or diploma.
- 53.0199 High School/Secondary Diploma Programs, Other.** Any high school/secondary diploma program not listed above, such as diplomas awarded to special education students for completion of an individualized education plan (IEP).
- 53.02 High School/Secondary Certificate Programs.** Instructional content for this group of programs is defined in codes 53.0201– 53.0299.
- 53.0201 High School Equivalence Certificate Program.** An instructional program that defines the requirements for meeting the minimum high school/secondary completion requirements specified by a U.S. state or other jurisdiction, for adult learners who did not complete secondary school. Includes undertaking a specified program of studies and obtaining a prescribed passing score on the General Educational Development Test (GED) or provincial examinations. These awards represent the legally recognized equivalent of secondary school graduation.
- 53.0202 High School Certificate of Competence Program.** An instructional program that defines the content requirements for meeting specified performance standards in various secondary school studies that does not represent completion of and graduation from secondary school, as prescribed by a U.S. state or other jurisdiction. Includes such requirements as passing a state- or province-mandated academic achievement test and completing other specified requirements for subject-matter competence. These awards may be given for partial completion of secondary school or for achieving a specified high level of concentration and/or performance in certain subjects, and may be

awarded independently or in conjunction with a high school/secondary diploma.

53.0203 Certificate of IEP Completion Program. An instructional program that defines the requirements for meeting specified goals pertaining to an Individual Educational Program established by a local school system under the authority of a state or other jurisdiction. Specific content varies by student and may or may not equal a regular high school/secondary school program.

53.0299 High School/Secondary Certificates, Other. Any certificate program at the high school/secondary instructional level not listed above.

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Appendix A

FRENCH (CANADIAN) LANGUAGE AND LITERATURE/LETTERS LANGUE et LITTÉRATURES FRANÇAISES/LETTRES

The codes in Series 55. are for the exclusive use of Statistics Canada in collecting data on Canadian programs in French that correspond to English programs (such as those listed in Series 23. for native speakers of the language). The use of Series 55. codes in the United States is inappropriate. Programs that provide instruction in French as a foreign language or that equip individuals to teach French in school settings should be reported either under Series 13. or 16.

55. LANGUE et LITTÉRATURES FRANÇAISES/LETTRES. Un ensemble de groupes de programmes d'enseignement qui décrivent la structure et l'utilisation du français et des dialectes connexes, des discours, de la rédaction et les divers aspects de la littératures et la cultures des différents peuples de langue française en Canada et le monde.

----- LANGUES et LITTÉRATURES ÉTRANGÈRE. (voir la série 16.)

55.01 Langue et littérature française, général. Un groupe de programmes (voir le code 55.0101).

----- Art dramatique/Théâtre et Arts de techniques du théâtre. (voir la série 50.05)

55.0101 Langue et littérature française, général. Un programme d'enseignement qui décrit, de façon générale, la langue française, y compris son histoire, sa structure et les compétences en communications; ainsi que la littérature et la culture des peuples de langue française.

----- Enseignement/Instituteur/Professeur de la française. (voir le code 13.1325)

----- Art dramatique/Théâtre, Général. (voir le code 50.0501)

55.02 Littérature comparative. Un groupe de programmes (voir le code 55.0201)

55.0201 Littérature comparative. Un programme d'enseignement qui décrit l'étude et la comparaison des littératures des différentes sociétés et groupes linguistiques; y compris l'analyse des facteurs d'influence interculturels, des styles littéraires nationaux, de l'impact des traductions ainsi que le partage de l'héritage littéraire internationale. Comprend des instructions sur l'étude de littératures dans la langue originale de même que sur la traduction du français.

55.03 Composition française. Un groupe de programmes (voir le code 55.0301).

55.0301 Composition française. Un programme d'enseignement qui décrit les principes du vocabulaire, de la grammaire, de la morphologie, de la syntaxe et des aspects sémantiques de la langue française; ainsi que les techniques utilisées pour la sélection, le développement, l'arrangement, la combinaison et l'expression d'idées sous formes écrites appropriées.

55.04 Écriture créative en française. Un groupe de programmes (voir le code 55.0401).

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- 55.0401 Écriture créative en française. Un programme d'enseignement qui décrit le processus et les techniques de composition originale sous diverses formes littéraires telles que la nouvelle, la poésie, le roman et autres. Comprend des cours portant sur les techniques de rédaction ou de révision, de critique littéraire, et de commercialisation de manuscrits terminés.
- 55.05 Littérature Canadienne française. Un groupe de programmes (voir le code 55.0501).
- 55.0501 Littérature Canadienne française. Un programme d'enseignement qui décrit l'étude de la littérature et du développement littéraire formel et folklorique des Canadiens français, de la période coloniale jusqu'à présent. Comprend des cours portant sur l'étude de périodes précises ou des styles, d'auteurs, de la critique littéraire et des traditions régionales ou de la langue orale.
- 55.06 Littérature françaises (France et la Communauté français). Un groupe de programmes (voir le code 55.0601).
- 55.0601 Littérature françaises (France et la Communauté française). Un programme d'enseignement qui décrit l'étude de la littérature et du développement littéraire formel et folklorique de France et les autres nations de la Communauté française, de les origines de la langue jusqu'à présent. Comprend des cours portant sur l'étude de périodes précises ou des styles, d'auteurs, de la critique littéraire et des traditions régionales et des dialectes ou de la langue orale.
- 55.07 Discours et rhétorique. Un ensemble de groupes de programmes (voir le code 55.0701).
- 55.0701 Discours et rhétorique. Un programme d'enseignement qui décrit l'étude de la communication humaine interpersonnelle du point de vue scientifique, comportemental et humaniste. Comprend des cours portant sur la théorie et la physiologie du discours, l'histoire du discours, la structure et l'analyse de l'argument et des genres de discours publiques, le rôle sociétal du discours, l'interprétation orale de la littérature, les interactions interpersonnelles ainsi que la relation entre le discours, la communication non verbale et les autres formes d'échange de messages.
- 55.08 Rédaction technique et commerciale en français. Un ensemble de groupes de programmes (voir le code 55.0801).
- 55.0801 Rédaction technique et commerciale en français. Un programme d'enseignement qui décrit la théorie, les méthodes et les compétences nécessaires à la rédaction et la révision de documents scientifiques, techniques, et commerciaux ainsi que des monographies.
- Journalisme et Média communication. (voir la série 09.04)
- Publicité. (voir le code 09.0201)

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- Relations publiques et communications organisationnelles. (voir le code 09.0901)

- 55.99 Langue et Littérature Française, Autres. Un ensemble de groupes de programmes (voir le code 55.9999).

- 55.9999 Langue et Littérature Française, Autres. Un programme d'enseignement qui décrit l'étude de la langue et littérature française qui ne sont pas classifiés ailleurs en la série 23.