

FAEIS Natural Resources and Conservation CIPS with Definitions

Content Taken from the National Center for Education Statistics Classification of Instructional Programs - 2010

03 NATURAL RESOURCES AND CONSERVATION. (No substantive changes)

Instructional programs that focus on the various natural resources and conservation fields and prepare individuals for related occupations.

03.01 Natural Resources Conservation and Research. (No substantive changes)

Instructional content for this group of programs is defined in codes 03.0101 - 03.0199.

03.0101 Natural Resources/Conservation, General. (No substantive changes)

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.

See also: 26.1307 - Conservation Biology.

03.0103 Environmental Studies. (No substantive changes)

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.

Examples:

- Ecosystem Studies

See also: 14.1401 - Environmental/Environmental Health Engineering.

03.0104 Environmental Science. (No substantive changes)

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.

Examples:

- Bioenvironmental Sciences

See also: 14.1401 - Environmental/Environmental Health Engineering., 26.1305 - Environmental Biology., 26.1307 - Conservation Biology.

03.0199 Natural Resources Conservation and Research, Other. (No substantive changes)

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

Examples:

- Environmental Conservation and Reclamation

03.02 Natural Resources Management and Policy. (No substantive changes)

Instructional content for this group of programs is defined in codes 03.0201 - 03.0299.

03.0201 Natural Resources Management and Policy. (No substantive changes)

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.

Examples:

- Ecosystem Management

03.0204 Natural Resource Economics. (No substantive changes)

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.

See also: 01.0103 - Agricultural Economics.

03.0205 Water, Wetlands, and Marine Resources Management. (No substantive changes)

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.

See also: 14.0805 - Water Resources Engineering., 26.1304 - Aquatic Biology/Limnology., 40.0605 - Hydrology and Water Resources Science.

03.0206 Land Use Planning and Management/Development. (No substantive changes)

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.

See also: 04.0601 - Landscape Architecture., 31.0301 - Parks, Recreation and Leisure Facilities Management, General.

03.0207 Natural Resource Recreation and Tourism. (New)

A program that prepares individuals to plan, develop, and manage tourism in a natural resource setting, with an emphasis on applying environmentally sound, culturally sensitive, and economically sustainable principles. Includes instruction in environmental studies; natural resource management and interpretation; tourism planning, management, and policies; public land use management and policies; communications; marketing; and public relations.

Examples:

- Ecotourism
- Resource Recreation and Tourism
- Nature-Based Tourism
- Natural Resources Interpretation
- Hunting and Fishing Guide

See also: 31.0301 - Parks, Recreation and Leisure Facilities Management, General.

03.0208 Natural Resources Law Enforcement and Protective Services. (New)

A program that prepares individuals to enforce natural resource and environmental protection regulations and laws; and to perform emergency duties to protect human life, property and natural resources, including fire prevention and control measures, and emergency and rescue procedures. Includes instruction in natural and physical sciences, natural resource management, outdoor field skills, firearms and outdoor equipment and vehicle operation, evidence collection and environmental sampling and monitoring, natural resource legislation, environmental compliance techniques, patrol procedures, investigation and report writing, interpersonal skills and crisis intervention, community liaison, public safety, public education, and public relations. Note: this program was re-instated after being deleted from CIP 2000; previously, it was coded as 03.0203.

Examples:

- Conservation Enforcement

03.0299 Natural Resources Management and Policy, Other. (No substantive changes)

Any instructional program in natural resources management and policy not listed above.

03.03 Fishing and Fisheries Sciences and Management. (No substantive changes)

Instructional content is defined in code 03.0301.

03.0301 Fishing and Fisheries Sciences and Management. (No substantive changes)

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.

See also: 26.1302 - Marine Biology and Biological Oceanography., 49.0303 - Commercial Fishing.

03.05 Forestry. (No substantive changes)

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

03.0501 Forestry, General. (No substantive changes)

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.

See also: 14.3401 - Forest Engineering.

03.0502 Forest Sciences and Biology. (No substantive changes)

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.

03.0506 Forest Management/Forest Resources Management. (No substantive changes)

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.

Examples:

- Silviculture
- Sylviculture

03.0508 Urban Forestry. (No substantive changes)

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. (No substantive changes)

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.

See also: 14.4001 - Paper Science and Engineering.

03.0510 Forest Resources Production and Management. (No substantive changes)

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. (No substantive changes)

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. (No substantive changes)

Any program in forestry not listed above.

03.06 Wildlife and Wildlands Science and Management. (No substantive changes)

Instructional content is defined in code 03.0601.

03.0601 Wildlife, Fish and Wildlands Science and Management. (No substantive changes)*CIP Title or Definition Changed*

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

See also: 26.0709 - Wildlife Biology.

03.99 Natural Resources and Conservation, Other. (No substantive changes)

Instructional content is defined in code 03.9999.

03.9999 Natural Resources and Conservation, Other. (No substantive changes)

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

Examples:

- Hunting and Trapping

14.0805 Water Resources Engineering. (No substantive changes)

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.

See also: 03.0205 - Water, Wetlands, and Marine Resources Management., 40.0605 - Hydrology and Water Resources Science.

14.1401 Environmental/Environmental Health Engineering. (No substantive changes)

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.

Examples:

- Environmental Engineering
- Environmental Management Engineering

See also: 03.0103 - Environmental Studies., 03.0104 - Environmental Science.

14.3401 Forest Engineering. (No substantive changes)

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.

See also: 03.0501 - Forestry, General.

26.0709 Wildlife Biology. (No substantive changes)

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.

See also: 03.0601 - Wildlife, Fish and Wildlands Science and Management.

26.1302 Marine Biology and Biological Oceanography. (No substantive changes)

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 palentology; and applications to fields such as fisheries science and biotechnology.

See also: 03.0301 - Fishing and Fisheries Sciences and Management., 30.3201 - Marine Sciences., 40.0607 - Oceanography, Chemical and Physical.

26.1304 Aquatic Biology/Limnology. (No substantive changes)

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.

Examples:

- Aquatic Ecology

See also: 03.0205 - Water, Wetlands, and Marine Resources Management.

26.1305 Environmental Biology. (No substantive changes)

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.

Examples:

- Environmental Microbiology

See also: 03.0104 - Environmental Science.

26.1307 Conservation Biology. (No substantive changes)

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.

See also: 03.0104 - Environmental Science., 03.0101 - Natural Resources/Conservation, General.

31.0101 Parks, Recreation and Leisure Studies. (No substantive changes)

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.

31.0301 Parks, Recreation and Leisure Facilities Management, General. (No substantive changes)

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.

See also: 03.0207 - Natural Resource Recreation and Tourism., 03.0206 - Land Use Planning and Management/Development.

40.0605 Hydrology and Water Resources Science. (No substantive changes)

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.

Examples:

- Hydrogeology

See also: 03.0205 - Water, Wetlands, and Marine Resources Management., 14.0805 - Water Resources Engineering.