

CLASSIFICATION OF EDUCATIONAL SUBJECT
MATTER (SA-CESM)

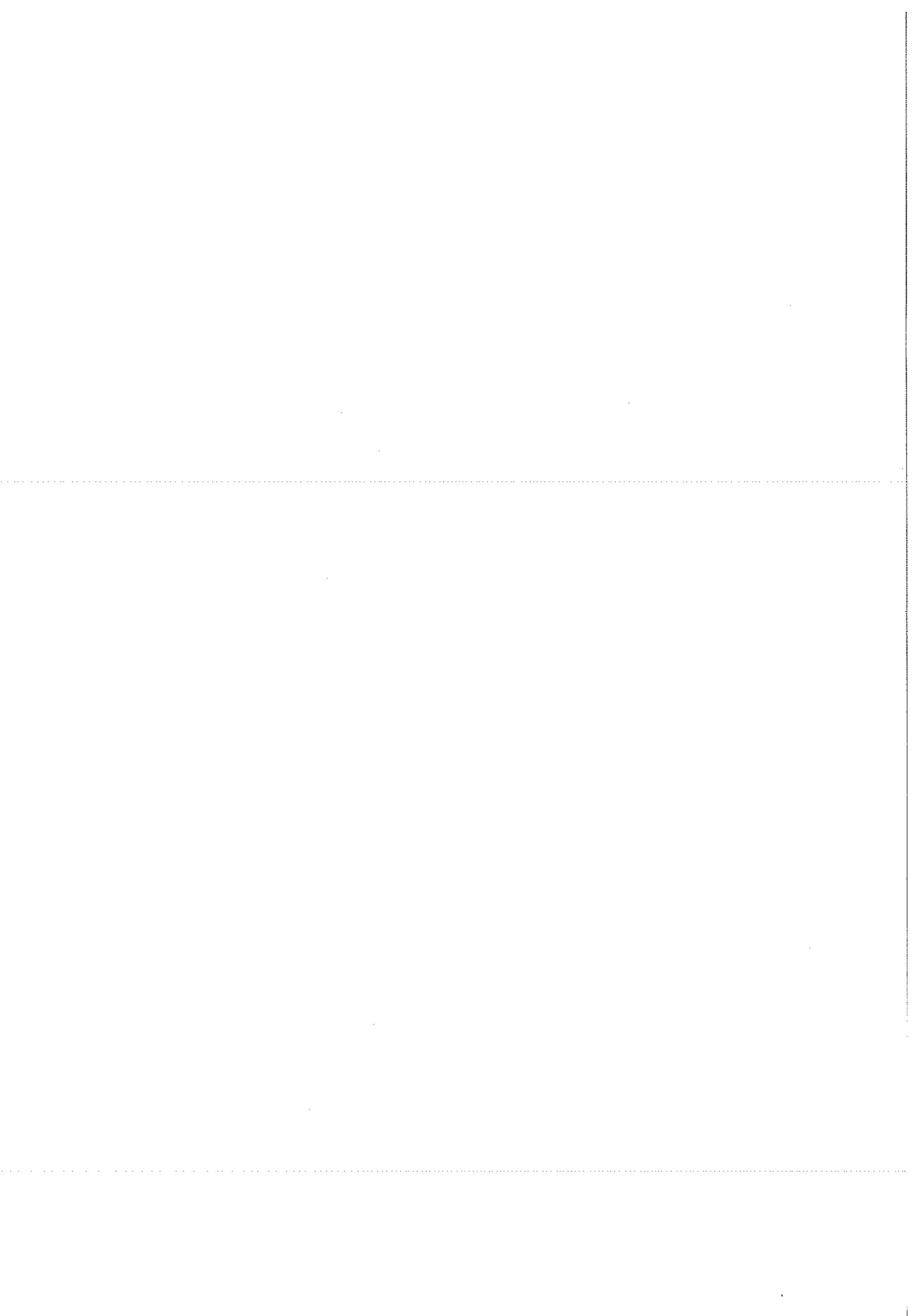
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PREFACE

The primary reason for developing this Classification is to provide a single, standardised scheme which will facilitate the recording, reporting, and exchange of data about subject matter. Although directed primarily toward formal educational agencies and institutions, the document will facilitate communication and understanding among a wide range of people having different interests and needs related to a classification of subject matter. It will be particularly useful to central, provincial and local government and education agencies, and to all institutions involved in administering educational and scientific activities.

ACKNOWLEDGEMENTS

The South African Classification of Educational Subject Matter presented in this manual is partly a South African adaptation of a development report entitled: "A Classification of Educational Subject Matter" by Educational Management Services, Inc. for the National Center for Education Statistics (NCES), U.S. Office of Education, U.S. Department of Health, Education, and Welfare. The final copy of this report, which was delivered to NCES in July 1977, was partly used as basis for the present manual.

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Summary

1. General information	1. General information
2. Objectives of the study	2. Objectives of the study
3. Methodology	3. Methodology
4. Results	4. Results

The study was conducted in a laboratory setting. The results showed that the proposed method is effective in reducing the error rate.

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CHAPTER I : INTRODUCTION

INTRODUCTORY COMMENTS

This document describes a classification of educational subject matter for use at all educational levels. It provides a single, coherent system for classifying subject matter regardless of the level of instruction, type of institution, or source of support and represents a necessary step toward the improvement of existing data collection, recording, and reporting procedures.

This document does not contain a classification of instructional programmes, nor should it be used as such. The classification of educational subject matter is a subjective array of knowledge and represents the substance and countenance of knowledge whereas instructional programmes represent the form and style by which knowledge, or subject matter, is transmitted and received. The latter can be defined in terms of the subject matter of which they are composed, or of experiences such as internships, practicum, and field trips. The schematic matrix in Figure 1 illustrates the relationship between instructional programmes and subject matter. A matrix like the one shown is unique to institutions as well as to students, but it does display the relationship between these two educational dimensions.

This document does not propose to serve as a framework for the organisation of educational agencies or institutions or for their departments or divisions. Any resemblance to existing organisational structures is unintentional. The subject-matter areas that constitute the framework for the hierarchical array were established subjectively.

NEED FOR A SUBJECT MATTER CLASSIFICATION

This classification of educational subject matter was developed in response to the needs of people involved in collecting and reporting data at all levels and types of educational agencies and institutions. More specifically, the following developments have made it necessary to have a comprehensive subject matter classification.

The introduction of an integrated information system for South African post-secondary education institutions required a classification of educational subject matter with reasonably precise definitions.

Figure 1

SUBJECT MATTER - INSTRUCTIONAL PROGRAMME MATRIX

ILLUSTRATIVE INSTRUCTIONAL PROGRAMMES

	Business Administration	Journalism	Fine Arts	Nursing
Accounting	X	X		
Speech Communication	X	X	X	X
Data Processing	X			
Music			X	
English	X	X	X	X
Algebra	X			
Biology				X
Physical Education				
Psychology	X	X	X	X
Economics	X			

ILLUSTRATIVE SUBJECT MATTER

In post-secondary education, an increasing number of institutions are crediting students for courses passed at other institutions such as universities, technikons and teacher training colleges. This educational practice will benefit from the reasonably precise definitions of this Classification.

Furthermore, secondary schools and post-secondary education institutions are offering courses which cover the same subject matter. This Classification will make it possible to relate the data pertaining to different levels.

This Classification, therefore, provides a single, standardised scheme which will facilitate the recording, reporting, and comparing of data about subject matter. Although directed primarily towards formal educational agencies and institutions, the document will facilitate communication and understanding among a wide range of people with different interests and needs related to subject matter. It will be useful to all institutions involved in the administration of educational and scientific activities.

EXAMPLES OF USE

Subject-matter data is categorised by subject-matter areas but can also reflect such characteristics as the number of courses in a particular subject-matter area, the number of students who are enrolled, the number of academic staff who are teaching, or the number of rands that are being consumed. Therefore the data which will be recorded and reported will be quantified by a number of indices such as credits, enrollments, and rands.

Use in Longitudinal Studies

Educational planners would like to be able to trace an individual's academic pursuits from early childhood to an undefinable point in life when formal education is no longer sought. If students are identified by common data-elements, their progress through the educational continuum can be analysed providing a uniform classification of subject matter is used. At present, many students become lost to gross analytic assessment when they move from one educational subsystem to another. Well defined subject-matter elements that can be universally recognised will thus be extremely useful in longitudinal studies.

Use Between Instructional Levels

Subject-matter data must not only be continuous, but contiguous as well, so that agency or institutional student data may be transferred from one educational setting to another. A uniform classification of subject matter, unencumbered by organisational descriptors, will facilitate student entry, transfer, exit, and re-entry when combined with other dimensions of educational data.

Use in Reporting Data

A standard classification of subject matter will facilitate compliance with the statutory reporting requirements for various educational agencies and institutions. A uniform terminology and structure is essential to the collection and recording of data, which is the first step of the reporting process. A comprehensive classification for all of education will expedite communication and information exchange about subject matter regardless of the type or location of the organisation providing instruction.

Use as a Reference Document

A comprehensive subject-matter classification is a very useful reference document which gives details of the many elements of instruction and also the hierarchical relationships that tie those elements together. The Classification can also serve as a reference for curriculum development and academic planning purposes.

Avoiding Misuse

In considering how the Classification should be used, it is necessary to stress that it is not a classification of instructional programmes, and that it is not a proposed framework or model for the organisation of agencies or institutions or of divisions or departments within them. The Classification is not an outline for instruction or a specification of how subject matter should be taught. It does not incorporate value judgments concerning the relative merit of subject-matter areas. Hierarchical rank is related to subject-matter genesis, not to perceived value or importance of particular areas of knowledge.

DEVELOPMENT OF THE CLASSIFICATION

This Classification was developed through extensive research and formal and informal advice and consultation. Understanding of the Classification will be enhanced by reviewing three major aspects which were concentrated upon in the development of the document.

Procedures for Classifying Subject Matter

Current and Common Usage. Only subject matter that was known to be currently in use in formal educational settings was included. The elements were chosen on the basis of subjective judgment rather than formal theoretical considerations. The Classification was not intended to be exhaustive. Included in it are only those subject-matter elements that are most commonly found and understood in formal educational agencies and institutions and about which data is routinely collected and reported.

Hierarchical Array. The subject-matter elements are presented in an hierarchical array to facilitate data aggregation and data recording and reporting. The areas represent what appeared to the compilers as generally accepted classes of subject matter. First-order designations are considered to be representative of the major categories for classifying knowledge. Second-order, third-order, and fourth-order entries are considered to be natural subdivisions of the major subject-matter areas.

Coding Structure. There are twenty-two first-order subject-matter areas in the Classification. These areas represent a subjective judgment about a reasonable number of categories into which knowledge can be classified for recording and reporting purposes. All subject matter could have been listed in alphabetical order without these aggregations, but to have done so would have been to ignore the natural groupings of subject matter. To allow for greater detail, each subject-matter area is disaggregated into descending hierarchical levels that are designated "Orders".

The coding structure is characterized by the use of two digits for each order in the Classification. The first-order, representing the subject-matter areas, is indicated by the first two digits. Each subsequent two digits represent another descending order of subject matter. Schematically, this may be represented as follows:

03 ARTS, VISUAL AND PERFORMING (First Order Subject-matter area)

03.03 MUSIC (Second Order)

03.03.03 Systematic Musicology (Third Order)

03.03.03.03 Music Philosophy (Fourth Order)

The potential four-level, eight-digit coding structure for the Classification allows reasonable detail but avoids many problems associated with a larger number of orders. The purposes for which data is collected in

specific instances will determine the required extent of detail, which might be greater or less than the four-level, eight-digit structure provides.

Criteria for Developing Entries

The importance of genetic categories of subject matter - that is, of subject-matter elements that have their genesis in the definition of the first order or other higher order categories - was stressed throughout the development of the Classification. The importance of single entries and integrity of subject matter was also stressed. In developing entries for subject-matter areas, four broadly defined criteria were taken into account: maturity, universality, magnitude, and relationship.

Maturity. The subject-matter elements should have been in use long enough to be commonly understood and accepted throughout the educational community. New areas of knowledge were included if they were currently recognised by all the compilers concerned, but esoteric descriptions that were perceived as new titles for well-established subject-matter elements were discarded.

Universality. In general, a subject-matter element should be found throughout a broad range of formal educational settings. This excluded, for example, limited offerings in highly restricted programmes to which minimal resources would be devoted. Universality can apply in several ways. Certain subject matter can be found in many institutions at specific levels or within special institutions such as business schools. On the other hand, subject matter may be universally found throughout all types of agencies or institutions, but within a restricted geographic area as is generally the case with Oceanography.

Magnitude. This criterion is related to numbers of students enrolled, number of classes taught, amount of resources consumed, or any other characteristic of size or number. An indication of great magnitude did not of itself determine the way in which subject matter was treated. Even though subject matter might be studied by nearly every school pupil and taught at virtually all post-secondary education institutions, it might still be subsumed under a higher-order designation.

Relationships. There generally exist natural relationships among subject-matter elements. Thus, Dentistry, Medicine and Veterinary Medicine are all grouped together because of their concern with Health Care and Health Sciences. On the other hand, subject-matter elements are sometimes grouped together because of incidental factors or somewhat artificial relationships. For example, Surveying is incidentally related to Engineering in much the same way as Mathematics is to Physics. But Surveying is an entry under Engineering because the relationship, even though an incidental one, was deemed to be relatively strong. In either case, the judgments and reasonable compromises of the relevant compilers produced the array of subject matter.

ORGANISATION OF THE CLASSIFICATION

CONTENTS

This first chapter provides an introduction to the document and describes how it may be used. Chapter Two consists of a hierarchical array of subject matter divided into twenty-two sections, each representing a designated area of subject matter. The subject-matter areas are identified, with page references, in Figure 2. Within each area, subject matter is disaggregated to second-order, third-order, and sometimes fourth-order entries. In some instances, the array is structured alphabetically. In others, the entries are arranged according to the relationships they have with each other.

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06	- Computer Science and Data Processing	31	180
07	- Education	34	190
08	- Engineering and Engineering Technology	37	204
09	- Health Care and Health Sciences	42	223
10	- Home Economics	48	251
11	- Industrial Arts, Trades and Technology	51	260
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20	- Psychology	88	396
21	- Public Administration and Social Services	92	409
22	- Social Sciences and Social Studies	95	420

Chapter Three contains definitions for each of the entries found in Chapter Two. The array by subject-matter area is the same for both chapters, and page references for Chapter Three are also shown in Figure 2.

CHAPTER II

CODED CLASSIFICATION OF EDUCATIONAL SUBJECT MATTER

This chapter contains the coded structure of the Classification of Educational Subject Matter. The structure consists of twenty-two subject-matter areas.

01 AGRICULTURE AND RENEWABLE NATURAL RESOURCES

Subject matter concerned with the production of food and fibre, and the conservation and development of the resources of arable and non-arable land, forests, soil, wildlife, fisheries, water, and outdoor recreation.

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02 ARCHITECTURE AND ENVIRONMENTAL DESIGN

Subject matter concerned with the methods by which man attempts to create, adapt, alter, preserve, and control his physical and social surroundings.

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04 BUSINESS, COMMERCE AND MANAGEMENT SCIENCES

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05 COMMUNICATION

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06 COMPUTER SCIENCE AND DATA PROCESSING

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08 ENGINEERING AND ENGINEERING TECHNOLOGY

Subject matter aimed at preparation for the practice of Engineering - the profession in which knowledge of the mathematical, natural and engineering sciences is gained by study and experience in practice and is applied with judgement to develop ways of economically utilising the materials and forces of nature for the benefit of mankind; and Engineering Technology - that part of the engineering field involving the application of scientific and engineering knowledge and methods combined with technical skills which lies in the occupational spectrum between the craftsman and the engineer.

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09 HEALTH CARE AND HEALTH SCIENCES

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10 HOME ECONOMICS

Subject matter concerned with the relationship between the physical, social, emotional, and intellectual environment in and of the home and family, and the development of individuals, including the study of the natural and social sciences and humanities in the development of attitudes, knowledge, and ability pertaining to clothing and textiles, consumer education, food and nutrition, home management, housing, human development and family studies, and institutional management.

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11 INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY

Subject matter concerned with mechanical work, a business, a livelihood, or an occupation that requires special skills, especially of a manual or technical nature.

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12 LANGUAGE, LINGUISTICS, AND LITERATURE

Subject matter concerned with the body of words and systems for their use that are common or indigenous to people of the same community or nation, the same geographical area, or the same cultural traditions; including such features as sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and appreciating thoughts and feelings through oral and written language.

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*The blank is used to code the appropriate language

13 LAW

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14 LIBRARIES AND MUSEUMS

Subject matter concerned with the knowledge and skills required to develop, organise, store, retrieve, administer, and facilitate the use of collections of information in such formats as books, documents, manuscripts, machine-readable data bases, filmed and recorded materials, specimens, artefacts, and other objects of permanent value.

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15 LIFE SCIENCES AND PHYSICAL SCIENCES

Subject matter concerned with the systematic study of objects or processes of matter, energy, and associated phenomena.

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16 MATHEMATICAL SCIENCES
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17 MILITARY SCIENCES

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18 PHILOSOPHY, RELIGION AND THEOLOGY

Subject matter concerning Philosophy : a critical analysis of and radical reflection on the ideas, theories, categories, concepts and methods for describing and evaluating human experience and reality.

Subject matter concerning Religion : the investigation of origin, history, institutional forms, beliefs and practices; and Theology, man's scientific, historically determined response to the revelation of God concerning Himself and His relationship to the cosmic reality.

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19 PHYSICAL EDUCATION, HEALTH EDUCATION AND LEISURE

30.01

Subject matter concerned with the systematic investigation of physical education, kinesiology, sport, dance, health education, and leisure.

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20 PSYCHOLOGY

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OTHER PSYCHOLOGY (SPECIFY)

21 PUBLIC ADMINISTRATION AND SOCIAL SERVICES

Subject matter concerned with the formulation, implementation, administration, and evaluation of public policies, programmes, and services, including those services which are directed toward the betterment of economic and social conditions.

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22 SOCIAL SCIENCES AND SOCIAL STUDIES

Subject matter concerned with behaviour, past and present activities, interactions, and organisations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes, and the procedures of social inquiry that have been selected and adopted for use in instructional situations.

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(SPECIFY) 444

CHAPTER III

DEFINITIONS OF EDUCATIONAL SUBJECT MATTER

This chapter contains definitions for the elements that are contained in the Classification of Educational Subject Matter. The definitions are arranged in the same twenty-two subject-matter areas as found in the previous chapter.

01 AGRICULTURE AND RENEWABLE NATURAL RESOURCES

Subject matter concerned with the production of food and fibre, and the conservation and development of the resources of arable and non-arable land, forests, soil, wildlife, fisheries, water, and outdoor recreation.

01.01 AGRICULTURAL ECONOMICS

The study of the transformation of limited agricultural resources, products, and services, and their influence upon prices, world trade, the economy, land values, multinational corporations, and the effect of these factors upon agriculture.

01.01 01 Agricultural Appraisal

The study of methods and techniques for determining the value of agricultural property.

01.01 02 Agricultural Credit and Finance

The study of the factors, sources, and policies that are applied to the control of the financial aspects of operating and managing an agricultural enterprise.

01.01 03 Agricultural Marketing

The study of the various marketing functions involved in the sale, processing, and distribution of agricultural products, including the study of commodity and terminal markets, co-operatives, and futures trading.

01.01 04 Agricultural Organisations

The study of current national, provincial, regional and local agricultural organisations including their development and purposes.

01.01 05 Agricultural Supplies

The study of the use of supplies, materials, and services in the production phase of agriculture, and the development and use of managerial tools for control and analysis.

01.01 06 Economic Development and International Trade

The study of the nature and effect of policies, processes, and trends of agricultural marketing upon national and world markets.

01.01 07 Farm Management

The study of the techniques of farm management, including resource analysis, accounting, production, financing, resource acquisition, purchasing, performance records, contracts and marketing to obtain optimum returns.

01.01 08 Public Policy and Agriculture

The study of the relationship, impact, and administration of public policies within the agricultural community.

01.01 99 Other Agricultural Economics (Specify)

01.02 AGRICULTURAL EXTENSION

The study of communication, adoption and diffusion of innovations, group dynamics and leadership, and rural sociology.

01.03 AGRICULTURAL FOOD TECHNOLOGY

The study of the chemical composition, nutritional value and microbiology of food stuffs, and their application in the processing of food stuffs from animal and plant sources.

01.03 01 Dairy Technology

The study of the technology involved in the processing of milk.

01.03 02 Fruit Technology

The study of the technology involved in the processing of fruit excluding the processing of grapes with the object of producing wine.

01.03 03 Meat Technology

The study of the technology involved in the processing of meat.

01.03 04 Vegetable Technology

The study of the technology involved in the processing of vegetables.

01.03 05 Wine Technology

The study of the technology involved in the processing of grapes with the object of producing wine.

01.03 99 Other Agricultural Food Technology (Specify)

01.04 ANIMAL SCIENCES

The study of the theories, principles, and application of appropriate technical skills that apply to the production and management of animals and animal products.

01.04 01 Animal Anatomy, Physiology and Biochemistry

The study of the anatomical structure, and body processes and functions, that relate to agricultural animal production, such as lactation, reproduction (including artificial insemination and heat detection), egg production, digestion, growth, and wool production.

01.04 02 Animal or Animal Products Selection and Evaluation

The study of the principles involved in the selection of animals or animal products through the identification of desirable characteristics related to the production performance, anatomy, and quality of the meat, milk, eggs, or fibre produced.

01.04 03 Animal Diseases, Parasites, and Insects

The study of methods of identification of diseases, parasites, or insect infestations in agricultural animals, and the application of preventive and curative measures.

01.04 04 Animal Genetics and Reproduction

The study of the principles of inheritance and their applications for the improvement of agricultural animals through breeding and selection.

01.04 05 Animal Health and Care

The study of the environment, drugs, antibiotics, vaccinations, blood tests, and other management factors that effect the prevention and control of diseases in agricultural animals.

01.04 06 Animal Management and Production

The study of the relationship between animal husbandry and the products obtained from animal growth, plus the approved practices associated with these relationships, such as dairy production, beef production, and poultry production.

01.04 07 Animal Nutrition

The study of the relationship in agricultural animals of proteins, fats, carbohydrates, water, minerals, vitamins, and feed additives in the production of meat, milk, eggs, and wool.

01.04 99 Other Animal Sciences (Specify)

01.05 HORTICULTURE

The study of the culture and production of fruits, vegetables, ornamental flowers, plants, shrubs, and trees, and the establishment, development, and management of ornamental and other horticulture enterprises.

01.05 01 Arboriculture

The study of the principles and practices involved in the culture and maintenance of woody plants used for decoration and shade purposes.

01.05 02 Floriculture

The study of the principles and practices involved in field or greenhouse production of flowers and the arrangement of such flowers for ornamental purposes.

01.05 03 Greenhouse and Nursery

The study of the principles and practices involved in producing plants under glass and in other artificial environments, including production of grass for lawns, plants, shrubs or trees for the purposes of transplanting or propagating them, including nursery operation, maintenance, and management.

01.05 04 Landscaping

The study of the principles and practices involved in locating, planting, and maintaining lawns, plants, shrubs, trees or devices for the beautification of home grounds and other areas of human habitation and recreation.

01.05 05 Production of Fruits

The study of the cultural principles and practices involved in the production of citrus fruits, apples, peaches, strawberries, and other kinds of fruit.

01.05 06 Production of Vegetables

The study of the cultural principles and practices involved in the production of potatoes, tomatoes, beans, seed maize, peas and other vegetable crops.

01.05 07 Production of Vegetables in Plastic Tunnels

The study of the special cultural principles and practices involved in the production of vegetables in plastic tunnels or related structures.

01.05 08 Lawns

The study of the principles and practices in growing, establishing, managing, and maintaining lawns for beautification of homes, grounds, and other areas of human habitation or recreation.

01.05 99 Other Horticulture (Specify)

01.06 PLANT SCIENCES

The study of the principles and practices involved in the culture of plants for the production of food and fibres and for soil conservation.

01.06 01 Plant Anatomy, Physiology and Microbiology

The study of the structure of agricultural plants, its relationship to life processes in plants, and the resultant implications for production principles and practices.

01.06 02 Plant Genetics and Reproduction

The study of principles of inheritance and their applications for the improvement of plants through breeding and selection.

01.06 03 Plant Insects and Plant Insect Control

The study of beneficial and harmful insects, spiders, snails, slugs, ticks, and mites, and their impact on plant production and control methods.

01.06 04 Plant Management and Production

The study of the relationship between growth stimulants and physical characteristics of plants and the cultural management of this relationship in such techniques as irrigation and pesticide application.

01.06 04 01 Production of Field Crops

The study of the cultural principles and practices involved in the production and use of field crops, including the topics of genetics, nutrition, soils, plant pathology, entomology, and disease and pest control.

01.06 04 02 Production of Pastures

The study of the cultural principles and practices involved in the production and management of natural and cultivated pastures.

01.06 04 03 Production of Specialty Crops

The study of the cultural principles and practices of specialty agricultural crops such as peanuts, cotton and tobacco.

01.06 05 Plant Nutrition

The study of the effect of various substances such as nitrates and potash on the production of grains, fibres, and other forms of agricultural plant life.

01.06 06 Plant Pathogens and Prevention

The study of the relevant principles of Microbiology and its application in the study of symptoms, causes, and control of agricultural plant diseases, infestations, and injuries; and the chemical, physical, biological, cultural, and genetic methods of control of plant diseases and associated plant pathogens.

III-01-08

01.06 07 Plant or Plant Products Selection and Evaluation

The study of plant taxonomy and plant products, emphasising qualitative aspects such as field crops judging, seed selection, or plant oil products comparisons.

01.06 08 Weed Control

The study of herbicides and their application in the production of a variety of crops.

01.06 99 Other Plant Sciences (Specify)

01.07 SOIL SCIENCES

The study of the physical, chemical, biological, and fertility principles and properties of soils in relation to their management for crop production and other agricultural operations.

01.07 01 Soil Chemistry

The study of the composition and changes in the various elementary forms of soil matter, such as the determination of the amount of nitrogen compounds in a soil.

01.07 02 Soil Classification

The study of the identification and systematic categorisation of soil according to soil growth potential, soil slope, and physical properties of soil.

01.07 03 Soil Conservation and Land Use

The study of the principles and practices involved in maintaining soil stability and productivity, including the prevention of erosion, pollution, waterlogging, plant nutrient exhaustion, and the accumulation of pollutants.

01.07 04 Soil Fertility

The study of soil composition and nutrient capabilities necessary for plant growth, including the identification of differences between available and required plant growth nutrients.

III-01-09

01.07 05 Soil Physics

The study of the physical properties and interactions of matter and the energy of soils.

01.07 06 Soil Texture

The study of the characteristic physical structure of soil composition, such as sand, clay, or loam.

01.07 99 Other Soil Sciences (Specify)

01.08 FISHERIES

The study of the principles and practices involved in protecting, breeding, and harvesting fish for sport and commercial purposes.

01.08 01 Fisheries Biology

The study of the life processes of water life, including age and rate of growth, populations and habitat, reproduction, and mortality.

01.08 02 Fisheries Management

The study of the principles and practices involved in the conservation, development, and harvesting of water life, including hatcheries operations and related law enforcement practices.

01.08 02 01 Commercial Fisheries

The study of the commercial processing and marketing of water life for food and other purposes.

01.08 02 02 Non-edible Water Life

The study of plant and animal water life from which medicinals, minerals, and other chemicals are extracted.

01.08 02 03 Sport Fisheries

The study of the processing and harvesting of fish for game and recreation fishing.

01.08 99 Other Fisheries (Specify)

III-01-10

01.09 FORESTRY

The study of the science, art, and practice of managing and using for human benefit the natural resources that occur on, and in association with, forest lands.

01.09 01 Forest Management

The study of the theory, principles, and practices of organising, planning, and controlling the utilisation of forest lands, including the study of the political and legal processes relating to forest management.

01.09 01 01 Forest Economics

The study of financial considerations involved in the use of forest resources for the production of goods and services

01.09 01 02 Forest Fire Control and Fire-breaks

The study of the prevention and suppression of wild fire and the application of prescribed burning of forest resources.

01.09 01 03 Forest Land-use Planning

The study of the development of alternative ways of allocating the use of forest land, and the identification of the consequences of each alternative for the purpose of guiding decision-makers.

01.09 01 04 Forest Mensuration

The study of the quantification and inventory of forest resources.

01.09 01 05 Forest Watershed Management and Hydrology

The study of the manipulation of vegetation to maximise the production of clean, clear water for human consumption, for manufacturing, and for irrigation.

01.09 01 06 Timber Harvesting and Transport

The study of techniques for harvesting and transporting products from forest lands to mills, including cartography, land surveying, and road, trail, and facilities construction.

III-01-11

01.09 02 Forest Biology

The study of plant and animal life in the forest, including ecological interrelationships; identification, classification, and habitat of trees and shrubs; the art of growing trees in managed stands; and the application of plant genetics to tree improvement.

01.09 02 01 Forest Botany

The study of the identification and systematic classification of trees.

01.09 02 02 Theory of Silviculture

The study of the life history and general characteristics of forest trees and stands with reference to local factors as a basis for the practice of silviculture.

01.09 02 03 Practice of Silviculture

The study of the science and art of growing and tending forest crops based on a knowledge of the theory of silviculture.

01.09 02 04 Tree Improvement

The study of the application of plant genetics to the development of trees with superior inherited traits.

01.09 03 Forest Products and Wood Technology

The study of products that are generated from resources removed from the forest, or that are manufactured from fibre harvested in the forest.

01.09 03 01 Lumber Manufacturing

The study of the techniques involved in the conversion of logs into boards.

01.09 03 02 Pulp Manufacturing

The study of the techniques involved in the conversion of timber into pulp.

01.09 03 03 Paper Manufacturing

The study of the techniques involved in the conversion of wood pulp into newsprint, kraft, and other paper grades.

01.09 03 04 Composite Wood Products Manufacturing

The study of the techniques involved in the conversion of logs into composite wood products such as plywood, lumberboard, particle board and fibre board.

01.09 04 Physical Properties of Wood

The study of the physical properties of wood: its composition, identification, and preservation, and the relationship between these properties and wood quality requirements.

01.09 04 01 Wood Anatomy

The study of the micro and macro structure of wood.

01.09 04 02 Wood Chemistry

The study of the elemental composition and compound derivatives of tree components.

01.09 04 03 Wood Identification

The study of features of wood structure vital to classification of tree species.

01.09 04 04 Wood Preservation

The study of chemical treatments of wood products, including the preservation of posts and poles, and piling for durability.

01.09 99 Other Forestry (Specify)

01.10 OUTDOOR RECREATION

The study of techniques of planning and maintaining outdoor recreation sites and programmes in the woodland environment.

III-01-13

01.11 WILDLIFE

The study of the principles and practices involved in protecting, breeding, and harvesting game and non-game animals.

01.11 01 Wildlife Biology

The study of life processes of wild game and non-game animals, including the study of wildlife population dynamics and wildlife reproduction.

01.11 02 Wildlife Management

The study of the principles and practices involved in the preservation and improvement of habitat for game and non-game wildlife, including relevant law enforcement procedures.

01.11 99 Other Wildlife (Specify)

01.12 LAND RECLAMATION

The study of the techniques of reclaiming waste, desert, marshy, or submerged land for cultivation or other use.

01.13 RENEWABLE NATURAL RESOURCES

The study of the general principles and processes involved in the conservation and improvement of renewable natural resources such as land, minerals, air, vegetation, and water for economic, recreational, and conservation purposes.

01.99 OTHER AGRICULTURE AND RENEWABLE NATURAL RESOURCES
(SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

02 ARCHITECTURE AND ENVIRONMENTAL DESIGN

Subject matter concerned with the methods by which man attempts to create, adapt, alter, preserve, and control his physical and social surroundings.

02.01 ENVIRONMENTAL DESIGN

The study of processes that promote the creation of aesthetic patterns, forms, and structures in harmony with the contextural environment to further human purposes.

02.01 01 Architectural Design

The study of the systematic process of creating architectural environments, synthesising knowledge of functional relationships, human behaviour, structural and environmental systems and technologies, and easthetic sensitivity.

02.01 02 Landscape Architectural Design

The study of design processes as applied to the ordering of man-made structures and objects and animate and inanimate natural materials on the landscape to further human purposes, synthesising knowledge of functional relationships, human behaviour, ecology, land form, construction technology, and aesthetic sensitivity.

02.01 02 01 Grading

The study of the techniques of utilising the nature of earth and earth movement in establishing the design of a grade or slope, synthesising functional needs and aesthetic sensitivity.

02.01 02 02 Planting Design (See 02.08 02)

The study of the use of plant materials in climatic modification, for visual enhancement of physical developments, both interior and exterior, and for other functional and aesthetic purposes.

02.01 03 Interior Design

The study of techniques of synthesising colour, form, space, line and textural elements for architectural interior spaces.

02.01 03 01 Ergonomic Design

The study of the systematic process of creating utensils and commodities for human use, in accordance with the dimensions, movements and other properties of the human body.

02.01 03 02 Furniture Design

The study of the systematic process of creating furniture according to anthropometrical data, aesthetic considerations and the properties of materials.

02.01 03 03 Illumination Design

The study of the systematic process of creating light fittings, sources and systems, and aesthetic lighting for interior and exterior environments.

02.01 03 04 Texture Design in Architecture and Environmental Design

The study of the systematic process of creating texture for elements for architectural environments.

02.01 04 Urban Design

The study of the systematic process of creating and modifying those physical elements which constitute a city; synthesising function, aesthetic sensitivity, technology, and social, psychological, and economic well-being.

02.01 05 Design of Signs

The study of the use of interior and exterior graphic elements for identifying, directing, informing, and controlling the movement of people within an environment.

02.01 06 Industrial Design

The study of the systematic process of creating utensils, commodities and components for use in the building and other manufacturing industries.

02.01 07 Architectural and Environmental Design
Psychology

The study of the psychological and sociological needs and aspirations of inhabitants and users of buildings and environments.

02.01 99 Other Environmental Design (Specify)

02.02 DESIGN AND PLANNING TECHNOLOGY

The study of the processes, procedures, observations, and techniques that are essential to the development of designs for interior and exterior environments.

02.02 01 Design Programming

The study of the methods through which data about the needs of a user of any ultimate facility are determined and expressed for the instruction of the designer in the development of a design solution.

02.02 02 Short- and Long-term Planning

The study of the methods through which data about the needs of a user of any ultimate facility are presented by the designer by means of drawings, models and other representation media.

02.02 03 Design Feasibility

The study of the methods through which data about the requirements of any ultimate facility are processed to establish whether the design is an acceptable and executable solution.

02.02 04 Design Economics

The study of the methods through which data about the requirements of any ultimate facility are evaluated to establish the financial implications of the proposed design solution

02.02 05 Building Economics

The study of the methods through which data about building elements and procedures are financially evaluated.

02.02 06 Budgeting and Cost Analysis

The study of the techniques of quantity surveying, cost estimating, scheduling, and project controls used in forecasting the construction costs and methods of financing projects.

02.02 07 Site Surveying

The study and application of methods through which the characteristics of a site are established, documented, and evaluated.

02.02 08 Building Surveying

The study and application of methods through which the forms of buildings and complexes of buildings are established, documented, and evaluated.

02.02 09 Site Analysis

The study of the techniques of analysing and evaluating the physical, ecological, and visual attributes or restraints of an individual site, including the visual attributes or restraints of the contextural environments.

02.02 10 Landscape Assessment

The study of the techniques of analysing and evaluating the physical, ecological, and visual attributes of the landscape.

02.02 11 Codes and Controls

The study of all codes, standards, zoning, and laws, ordinances, municipal bylaws and regulations that are applicable to the design and planning of structures and spaces.

02.02 12 Design Specialisations

The study of specific technology which is relevant only to a particular field of design.

02.02 12 01 Recreation and Sports Area Design

The study of design processes specific to recreation and sports areas, including parks and golf courses, that synthesise knowledge of recreation needs, games and game space requirements, land form, construction and maintenance technologies, and aesthetic sensitivity.

02.02 12 02 Temporary Structures

The study of the materials and methods of fabrication required in the design of relocatable structures, such as air, tent and geodesic structures, movable classrooms, and mobile homes.

02.02 12 03 Preservation and Restoration

The study of the technology required in planning, funding, and implementing projects for historic preservation, restoration, and adapted use of buildings, landscape, and neighbourhoods.

02.02 12 04 Recycling of Existing Buildings

The study of the methods required in planning, funding and implementing projects whereby existing buildings are re-used in the present or altered form.

02.02 12 05 Design of High-rise Buildings

The study of the design processes, specific to multi-storied buildings, that synthesise knowledge of the need for buildings with multiple floors, land form, construction and maintenance technologies, materials and aesthetic sensitivity.

02.02 12 06 Design of Commercial Investment Buildings

The study of the design processes, specific to commercial investment buildings, that synthesise knowledge of the need for feasible, commercial investment buildings, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 07 Industrialised Building and System Building

The study of the design processes, specific to industrialised and system building methods, that synthesise knowledge of prefabricated elements and of designing building systems for the construction of buildings and structures, taking into consideration land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 08 Civil, Mechanical and Electrical Engineering
Design Aesthetics

The study of the design processes of civil, mechanical and electrical engineering elements that synthesise knowledge of the requirements of engineering services, construction and maintenance technologies, and materials, while conforming to design aesthetics.

02.02 12 09 Design of Educational Facilities

The study of design processes, specific to educational facilities, that synthesise knowledge of educational needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 10 Design of Medical Facilities

The study of design processes, specific to medical facilities, that synthesise knowledge of medical needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 11 Design of Ecclesiastical Facilities

The study of design processes, specific to ecclesiastical facilities, that synthesise knowledge of ecclesiastic needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 12 Design of Library Facilities

The study of design processes, specific to library facilities, that synthesise knowledge of library needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 13 Design of Factories, Warehouses and Markets

The study of design processes, specific to factories, warehouses and markets, that synthesise knowledge of manufacturing, storing and marketing needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 14 Design of Community and Civic Centres

The study of design processes, specific to community and civic centres, that synthesise knowledge of community and civic needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 15 Design of Offices and Shops

The study of design processes, specific to offices and shops, that synthesise knowledge of managerial and commercial needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

III-02-07

02.02 12 16 Design of Exhibition Facilities

The study of design processes, specific to exhibition facilities, that synthesise knowledge of exhibition needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 17 Design of Military and Security Facilities

The study of design processes, specific to military and security facilities, that synthesise knowledge of military and security needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 18 Design of Transportation Facilities

The study of design processes, specific to transport facilities, that synthesise knowledge of the need for transport by land, water and air, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 19 Design of Monuments

The study of design processes, specific to monuments, that synthesise knowledge of the need to venerate or commemorate, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 20 Design of Agricultural and Botanical Facilities

The study of design processes, specific to agricultural and botanical facilities, that synthesise knowledge of agricultural and botanical needs, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 21 Design of Mass Housing

The study of design processes, specific to mass housing, that synthesise knowledge of the need to house people in mass, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 22 Design of Domestic Housing

The study of design processes, specific to domestic housing, that synthesise knowledge of housing needs of domestic nature, land form, construction and maintenance technologies, materials and aesthetic sensitivity.

02.02 12 23 Design of Hotels

The study of design processes, specific to hotels, that synthesise knowledge of the need for irregular accommodation, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 12 24 Design of Hostels

The study of design processes, specific to hostels, that synthesise knowledge of the need for regular accommodation, land form, construction and maintenance technologies, materials, and aesthetic sensitivity.

02.02 99 Other Design and Planning Technology (Specify)

02.03 HISTORY OF ENVIRONMENTS

The study of the development, change, and trends in human interaction with the environment.

02.03 01 Architectural History

The study of the development, change, and trends of architecture in the past, and the influence architecture has had on cultural and social development.

02.03 02 Landscape Architectural History

The study of the development, change, and trends of landscape architecture in the past, and the influence landscape architecture has had on cultural and social development.

02.03 03 Interior Architectural History

The study of the development, change, and trends of architectural interiors, and the influence interior architecture has had on cultural and social development.

02.03 04 History of Urban Design

The study of the development, change, and trends of urban design in the past, and the influence urban design has had on cultural and social development.

02.03 05 History of Sign Design

The study of the development, change and trends of sign design in the past, and the influence sign design has had on cultural and social development.

02.03 06 History of Industrial Design

The study of the development, change and trends in industrial design in the past, and the influence industrial design has had on cultural and social development.

02.03 99 Other History of Environments (Specify)

02.04 CONSTRUCTION AND DESIGN IMPLEMENTATION

The study of the methods of fabrication and erection of structures, life support systems, and other elements essential to the erection of designed spaces and structures, including the management of such erection.

02.04 01 Construction Technology

The study of the co-ordinated methods of construction which, when executed in accordance with an environmental design, result in the completion of interior and exterior environments. These methods may be applied to such factors as foundations, water-proofing, paving, structural systems, fireproofing, masonry, roofing, planting, and lighting.

02.04 02 Contractual Procedures

The study of the management, effects and trends in contractual procedures in the building and construction trades.

02.04 03 Construction Supervision

The study of the procedures and techniques involved in all phases of construction, including quantity surveying and tendering, scheduling and control, contract document interpretation, building systems, construction practices, and labour and safety practices.

02.04 04 After-care Supervision of Architectural and Environmental Design Projects

The study of methods to ensure regular maintenance of buildings and structures in use.

III-02-10

02.04 99 Other Construction and Design Implementation
(Specify)

02.05 COMMUNICATION IN ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of the methods of organising, recording, and transmitting information relevant to the formulation and execution of environmental design, including the development of skills in drafting, drawing, rendering, and the construction of scale models and renderings for buildings, landscapes, and other environmental elements.

02.05 01 Graphic Communication

The study of the methods, materials, and techniques involved in the communication of ideas, concepts, relationships, and envisioned design projects through the use of diagrams, graphs, drawings, and other graphic forms.

02.05 02 Architectural Drafting

The study of the theories of projection, the materials, the techniques, and the symbols used to communicate explicit information about envisioned design projects.

02.05 03 Rendering

The study of the materials and techniques used in specialised types of drawing which are intended to bring out the spirit and visual effect of envisioned design projects.

02.05 04 Model Building

The study of the techniques and materials used in the construction and presentation of small-scale, three-dimensional prototypes of envisioned design projects.

02.05 05 Contract Documents

The study of legal documents used in construction, including construction drawings, specifications, contracts, bonds, addenda, variation orders, retention monies, authorisations for payment, substantial completion agreements, and guarantees.

02.05 05 01 Design Drawings

The study of design processes to compile preliminary drawings which will facilitate the needs of the client, and will express the design considerations of the designer.

02.05 05 02 Working Drawings

The study of the materials, techniques, and symbols used in the preparation of drawings of a design which will facilitate construction and design implementation.

02.05 05 03 Specifications

The study of written instructions that describe in detail the construction work to be undertaken, or the materials, furnishings, and plant to be purchased and installed.

02.05 06 Photography in Architecture and Environmental Design

The study of the photographic means used to illuminate or represent aspects or features of designs, either in the aesthetic sense or as a documentation method.

02.05 07 Verbal Communication and Presentation

The study of the methods used in verbal conveyance of the design and feasibility considerations to involved parties.

02.05 99 Other Communication in Architecture and Environmental Design (Specify)02.06 STRUCTURAL TECHNOLOGY

The study of the behaviour and utilisation of structural materials in building construction.

02.06 01 Steel Structures

The study of the fundamentals of structural design in steel.

02.06 02 Concrete Structures

The study of the fundamentals of structural design in concrete.

02.06 03 Wood Structures

The study of the fundamentals of structural design in wood.

02.06 04 Brick and Stone Structures

The study of the fundamentals of structural design in bricks and stone.

02.06 05 Combined Structures

The study of the fundamentals of structural design in the fabrication of structures which incorporate a combination of materials.

02.06 99 Other Structural Technology (Specify)

02.07 ENVIRONMENTAL TECHNOLOGY

The study of the methods and materials required to provide those environmental elements that affect the physical well-being of the occupants of the space being modified or constructed.

02.07 01 Environmental and Energy Systems

The study of the theory and application of environmental-mechanical principles involved in comfort technology, waste disposal techniques, electrical systems, lighting systems and fire-protection systems.

02.07 01 01 Heating, Ventilating, and Air Conditioning

The study of the utilisation of thermal and air flow systems in environments.

02.07 01 02 Lighting

The study of the utilisation of illumination or lighting systems.

02.07 01 03 Plumbing

The study of the utilisation of water, liquid waste, or plumbing systems.

02.07 01 04 Storm Drainage

The study of the utilisation of rain, snow, or hail drainage systems.

02.07 01 05 Irrigation

The study of the utilisation of systems for the artificial application of water.

02.07 01 06 Alternative Energy Systems

The study of the utilisation of alternative energy systems in environments.

02.07 01 07 Fire-protection Systems

The study of the methods of implementing a system to safeguard environments against fire according to established principles or regulations.

02.07 02 Acoustics

The study of the techniques and materials used in controlling sound, both objectionable and desirable, in environments.

02.07 03 Building Transportation Systems

The study of the design principles governing the selection of appropriate transportation systems for various settings, and the principles governing the aesthetic and functional utilisation of the system on the site.

02.07 03 01 Elevators

The study of the utilisation of elevator systems.

02.07 03 02 Escalators

The study of the utilisation of escalators.

02-07 03 03 Moving Walkways

The study of the utilisation of moving walkways.

02.07 99 Other Environmental Technology (Specify)

02.08 MATERIALS OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of natural and artificial substances such as earth, wood, metal, and plastic used in various parts of building structures and in interior and exterior environments.

02.08 01 Construction Materials

The study of the materials that are used in various parts of buildings and outdoor structures.

02.08 02 Plant Materials (See 02.01 02 02)

The study of the trees, shrubs, evergreens, flowers, lawns, erosion control plants, and other related materials that are used in the construction of interior and exterior environments.

02.08 03 Interior Components

The study of the materials and equipment that are utilised in interior environments, including such things as furniture, drapes and carpeting.

02.08 99 Other Materials in Architecture and Environmental Design (Specify)

02.09 MANAGEMENT IN ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of management principles and techniques applied to the practice of architecture and environmental design.

02.09 01 Management of Architectural and Environmental Design Practices

The study of the methods, procedures and processes of management applied to the running of architectural and environmental design practices.

02.09 02 Management of Architectural and Environmental Design Projects

The study of architectural and environmental design project management.

02.09 03 Relationship between Architects and Environmental Designers and their Clients

The study of the relationship of architects and environmental designers with their past, present and potential clients.

02.09 99 Other Management in Architecture and Environmental Design (Specify)

02.10 PROFESSIONAL PRACTICES OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

The study of the requirements for the professional practices of architecture and environmental design in the interests of the community.

02.10 01 Ethics in Architecture and Environmental Design

The study of the ethics of professionalism applied to the practices of architecture and environmental design.

02.10 02 Professional Associations in Architecture and Environmental Design

The study of the professional architectural and environmental design associations and the legislation applicable to these professions.

02.10 03 Codes of Professional Practice in Architecture and Environmental Design

The study of the codes of professional practice applicable to the practices of architecture and environmental design.

02.10 04 Codes and Standards in Architecture and Environmental Design

The study of the codes and standards applicable to building and construction.

02.10 05 Legislation and Regulations in Architecture and Environmental Design

The study of the legislation, by-laws and regulations applicable to building and construction.

02.10 99 Other Professional Practices of Architecture and Environmental Design (Specify)

02.11 PLANNING

The study of the processes involved in the development of alternative ways of achieving various societal goals, including the identification of the consequences of each alternative, for the purpose of guiding decision-makers in their deliberations.

02.11 01 Community-development Planning

The study of the application of the planning process to the maintenance, development, or revitalisation of a community.

02.11 02 Housing Planning

The study of the application of the planning process to the problems of housing.

02.11 03 Land-use Planning

The study of the application of the planning process to the development of land-use regulations.

02.11 04 Natural-resource Planning

The study of the application of the planning process to the development, utilisation, and conservation of natural resources.

02.11 05 Open Space Planning

The study of the application of the planning process to the development, utilisation, and maintenance of open spaces.

02.11 06 Recreation Resources Planning

The study of the application of the planning process to the development, utilisation, and maintenance of recreational resources.

02.11 07 Social Planning

The study of the application of the planning process to the development of environmental programmes designed to deal with major social needs related to such things as personpower, criminal justice, health, and education.

02.11 08 Economic Planning

The study of the application of the planning process to the development of environmental programmes designed to deal with major economic needs.

02.11 09 Transportation Planning

The study of the application of the planning process to the development of programmes designed to deal with transportation needs.

02.11 09 01 Vehicle Traffic Planning

The study of the application of planning principles to solve environmental problems created by vehicle traffic.

02.11 09 02 Pedestrian Traffic Planning

The study of the application of planning principles to solve environmental problems created by pedestrian traffic.

02.11 09 03 Mass Transit Planning

The study of the application of planning principles to solve environmental problems created by the conveyance or transportation of large numbers of persons or goods.

02.11 10 Urban, Regional and Other Area Planning

The study of the application of the planning process to the development of environmental programmes designed to deal with urban, regional, and other geographically distinct areas.

02.11 11 Water Resources Planning

The study of the application of the planning process to the development, utilisation, and conservation of water resources.

02.11 12 Environmental Planning

The study of the application of the planning process to the development of programmes concerned with environmental problems, needs, and concerns.

02.11 13 Historic Preservation Planning

The study of the application of the planning process to the development, utilisation, and conservation of historic districts and communities.

02.11 99 Other Planning (Specify)

02.99 OTHER ARCHITECTURE AND ENVIRONMENTAL DESIGN
(SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

III-03-01

03 ARTS, VISUAL AND PERFORMING

Subject matter concerned with the creation and perception of auditory, kinaesthetic, and visual phenomena which express ideas and emotions in various forms, subject to aesthetic criteria and related functions.

03.01 DANCE (See 19.04 - Dance)

The study of the history, criticism, theory, choreography, and performance of dance, and the development of dance skills and techniques.

03.01 01 Dance Studio and Performance

The study of the performance, choreography, and development of skills for any of the various kinds of dance which may include, but are not limited to, ballet, modern, jazz, ethnic, ritual, and folk dance.

03.01 02 Dance Studies

The study of dance as an art form through its literature, history, theory, and composition.

03.01 03 Dance in Education

The study of those aspects of dance which have specific relevance to educational settings.

03.01 99 Other Dance (Specify)**03.02 FILM AS ART (See 05.06 - Film as Communication)**

The study of the historic development, aesthetic qualities, and creative process of the moving image as a means of artistic expression.

03.02 01 Art Film Production

The study and practice of the technique and skills involved in the creation of motion pictures as an art form.

03.02 02 Art Film Studies

The study of the historical, critical, theoretical, and educational aspects of motion pictures as an art medium.

03.02 99 Other Film as Art (Specify)

03.03 MUSIC

The study of the art and science of combining sounds of various timbres in harmonic, rhythmic, or melodic forms which are artistically expressive.

03.03 01 Music Studio and Performance

The applied study of and performance on musical instruments, or the applied study of voice and vocal performance, either solo or in ensemble.

03.03 01 01 Applied Instrumental and Vocal Music

The study of performance and repertory on a solo instrument, the study of performance and repertory in voice.

03.03 01 02 Ensembles

The study of performance and repertory involving two or more players and/or singers.

03.03 01 03 Music Conducting

The study of conducting techniques, interpretation, and style that may lead to a musical performance.

03.03 02 Historical Musicology

The study of the history, role, and significance of music to provide an understanding and appreciation of music in its various stylistic manifestations.

03.03 03 Systematic Musicology

The study of music as an auxiliary to a number of humanistic disciplines.

III-03-03

03.03 03 01 Music Education

The study of music in all aspects which have educational relevance.

03.03 03 02 Music Ethnology

The study of music as manifested in the races of man, past and present, in all countries of the world.

03.03 03 03 Music Philosophy

The speculative study of music concerning aspects of the beautiful in musical sound forms, and its place in the totality of human experience.

03.03 03 04 Music Psychology

The study of the hearing and listening processes in the human body and mind.

03.03 03 05 Music Sociology

The study of music in human society.

03.03 04 Organology and Acoustics

The study of music based on its foundations in natural law, leading to all types of instruments and the complete theory of music in its relevance to various style periods.

03.03 04 01 Musical Acoustics

The study of the various types of sound produced by the different types of instruments.

03.03 04 02 Musical Instrument Design, Maintenance and Repair

The study of the techniques of designing, maintaining, and repairing musical instruments.

03.03 04 03 Music and Technology

The study of the application of technology to the recording and reproduction of music and to the creation of new sound principles in electronic music.

III-03-04

03.03 04 04 Music Theory

The study of the principles, forms, and foundations of music.

03.03 05 Musical Composition

The study of techniques of creating and arranging tonal combinations and sequences, including the creation itself.

03.03 06 Musical Criticism

The study of the techniques of judging music in composition and performance.

03.03 07 Commercial Music

The study of music as it pertains to recording, television, radio, publishing, and related industries.

03.03 08 Music Librarianship

The study of the cataloguing and systematisation of all musical materials in an available form.

03.03 99 Other Music (Specify)

03.04 THEATRE ARTS

The study of the development, theory, and processes of creating live performances through human expressive modalities.

03.04 01 Theatre Arts Studio and Performance

The study of and engagement in the processes of live performance in the theatre.

03.04 01 01 Acting

The study of such elements as stage voice, stage movement, mime, and dramatic improvisation to create characters for presentation on the stage.

03.04 01 02 Directing

The study of the planning, staging, and implementing of dramatic productions.

03.04 01 03 Playwriting

The study and creation of form, structure, and style in the written play.

03.04 01 04 Technical Theatre and Design

The study of the physical aspects of theatrical production, including the design and realisation of scenery, costume, lighting, make-up, sound, properties, and surrounding environment.

03.04 02 Theatre Studies

The study of the theatre as an art form through its literature, history, theory, criticism, composition, and practice.

03.04 02 01 Theatre Theory and Criticism

The study of the aesthetic bases of theatre, emphasising questions of artistic value and merit, their relationship to relevant social and behavioral studies, and to other aspects of contemporary life and times.

03.04 02 02 Theatre History

The study of the development of dramatic literature, criticism, the physical theatre, the elements of production, and the artists and craftsmen who have contributed to the theatrical heritage.

03.04 02 03 Dramatic Literature

The study of the types, forms, and styles of plays from the past and present.

03.04 03 Theatre in Education

The study of various aspects of theatre arts such as creative drama, developmental drama, and informal drama which have specific relevance to educational settings including schools, community arts centres, museums, and various social and recreational settings.

03.04 99 Other Theatre Arts (Specify)

03.05 VISUAL ARTS

The study of subject matter concerned with visual phenomena which embody aesthetic content and creative effort.

03.05 01 Visual Arts Studio and Production

The study of the organisation of materials and media for two- or three-dimensional visual effects that communicate ideas and express motions subject to aesthetic and functional considerations.

03.05 01 01 Fine Arts

The study and development of the skills and abilities that are necessary for the production of unique works of visual art that express purely artistic intention, including the art forms of drawing, painting, and print-making; sculpture in a variety of media; and photography and electronic imagery.

03.05 01 02 Crafts

The study of activities relating to the conception and production of one-of-a-kind objects which have aesthetic merit and which demonstrate creative effort, including those in wood, metal, clay, fibre, and other materials.

03.05 01 03 Foundations of Visual Arts Design

The study of the principles of visual organisation which emphasise aesthetic qualities such as light, colour, shape, and pattern.

03.05 01 04 Application of Visual Arts Design

The study of the utilisation of visual design skills for applied arts purposes including drawing, the organisation of two- or three-dimensional materials, and the selection of materials for artistic and functional purposes, as well as study of the fields of illustration, graphic design, interior design, industrial design, technical and mechanical illustration, and electronic imagery.

03.05 02 Visual Arts Studies

The study of historical, social, psychological, philosophical, critical, and educational aspects of the visual arts.

III-03-07

03.05 02 01 Art History and Appreciation

The study of the history of the visual arts and their relationship to concurrent events, the evolution of artistic styles, the lives of artists, and the role of the visual arts in human affairs, including contemporary times.

03.05 02 02 Art Theory and Criticism

The study of the aesthetic bases of the visual arts, emphasising questions of artistic value and merit, including their relationship to relevant social and behavioural studies and other aspects of contemporary life and times.

03.05 03 Visual Arts in Education

The study of various aspects of the visual arts which have specific relevance to educational settings, including schools, community art centres, museum programmes, and social and recreational settings.

03.05 04 Art Restoration, Preservation, Exhibition, and Cataloguing

The study of the theory and practice of maintaining, restoring, repairing, exhibiting, and cataloguing works of visual art.

03.05 99 Other Visual Arts (Specify)

03.06 RELATED ARTS

The study of the arts, their relationship to each other, and their humanistic concerns.

03.06 01 Related Arts Studio and Production

The study of processes and performances that involve two or more of the visual and performing arts.

03.06 01 01 Multi-media Production

The study of the combination of two or more of the visual and performing arts.

03.06 01 02 Music Theatre

The study of the type of multi-media utilisation that combines aspects of music, dance, and theatre such as "musical comedy" and opera.

03.06 02 Related Arts Studies

The study of the theory, techniques, history, and development of the related arts.

03.06 02 01 Humanities

The study of subjects or courses that embrace a humanistic relationship between ideas as expressed through the visual, performing, and other arts.

03.06 02 02 Allied Arts

The study of the relationship of the arts within such contexts as principles, techniques, elements, style, structure, subject, function, and media.

03.06 02 03 Ethnic Arts

The study of areas of the arts that emphasise or reflect geographical, racial, ideological, political, religious, or social aesthetic concepts.

03.06 03 Related Arts and Aesthetic Education

The study of those areas of the arts that are concerned with the personal development of aesthetic perception, response, and sensitivity.

03.06 04 Related Arts Management and Administration

The study of the techniques of planning, organising, and controlling artistic productions such as art shows, film festivals, theatrical productions, concert series, and recitals.

03.06 99 Other Related Arts (Specify)

03.07 ARTS THERAPY

The study of the utilisation of the visual and performing arts as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 01 Art Therapy

The study of the utilisation of art as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 02 Dance Therapy

The study of the utilisation of dance as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 03 Drama Therapy

The study of the utilisation of drama as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 04 Music Therapy

The study of the utilisation of music as a diagnostic and therapeutic mode concerned with mental and physical health.

03.07 99 Other Arts Therapy (Specify)

03.99 OTHER ARTS, VISUAL AND PERFORMING (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

04 BUSINESS, COMMERCE AND MANAGEMENT SCIENCES

Subject matter concerned with processes of purchasing, selling, producing and interchanging of goods, commodities and services for the purpose of gaining a profit, advantage, or benefit.

04.01 ACCOUNTING

The study of the principles, procedures, and theory of business and financial transactions.

04.01 01 Accounting Principles

The study of the principles, procedures, and theory of accounting, including the preparation and maintenance of financial records, and the preparation and analysis of statements.

04.01 02 Accounting Systems

The study and analysis of techniques and procedures used to evaluate and improve existing accounting systems.

04.01 03 Auditing

The study of the concepts, objectives, and ethics applicable to auditing, including audit plans, internal control, sampling, and specific auditing procedures concerned with such items as cash, investments, debtors stocks, plant, equipment and expenses.

04.01 04 Book-keeping

The study of the fundamental principles involved in the preparation and maintenance of financial records that are concerned with management and operations.

04.01 05 Budgeting

The study of the theories and practices of regulating expenditures, of planning capital expenditure, of establishing cash budgets and profit plans.

04.01 06 Cost Accounting

The study of procedures and practices involved in accounting for materials, labour, overhead, by job-order, process, or operation, including systems of accounting related to sales and accounting used as a tool of managerial control.

04.01 07 Data Processing Accounting

The study of the principles and techniques of utilising modern electronic data processing applications for accounting records and systems.

04.01 08 General Accounting

The study of principles, procedures, and theory of recording, maintaining, interpreting and reporting, financial transactions of business and industry.

04.01 09 Governmental and Institutional Accounting

The study of the principles and procedures of applying accounting methods and budget control to governmental units and non-profit institutions.

04.01 10 Machine Book-keeping

The study of the principles and procedures of using book-keeping machines to post Debtors and other control account data.

04.01 11 Managerial Accounting

The study of the principles and procedures of using accounting reports for managerial decision-making.

04.01 12 Payroll Accounting

The study of the principles and procedures of payroll accounting and control, including the study of the relevant legislation and its interpretations and the preparation of statutory reports.

04.01 12 01 Payroll Record-keeping

The study of legislation that affects payroll; of basic pay-roll forms and records and their uses; of practices of calculating hours worked, overtime, gross and net pay, and deductions of employees; and of practices of preparing records and required statutory reports.

04.01 13 Record-keeping

The study of the principles and procedures of using subsystems of accounting to prepare and maintain records for cash and banking, payroll, invoicing, stock, Debtors and Creditors, and other similar records within the total accounting system.

04.01 14 Taxation

The study of legal and accounting principles, procedures and regulations applicable to the maintenance of records and the preparation of income tax returns for companies and persons other than companies.

04.01 99 Other Accounting (Specify)

04.02 ADMINISTRATIVE AND OFFICE SERVICES

The study of the techniques and procedures for collecting, classifying, processing, computing, communicating, reporting, storing, and retrieving information in an organisation.

04.02 01 Administrative Procedures

The study of the principles and techniques of administration and supervision that are employed in a variety of organisational settings.

04.02 01 01 Administrative Office Procedures

The study of the principles and procedures of office administration, including organisation of the office, office design, office procedures, personnel administration, employee training, records management, work simplification, management of accounting activities, and data processing functions.

04.02 01 02 Clerical Procedures

The study of the principles and procedures of using the skills of filing, record-keeping, typewriting, telephone usage, human relations, office machine operation, and mail processing in a variety of organisations.

04.02 01 03 Secretarial Procedures

The study of the principles and procedures involved in the application and integration of secretarial skills in dictation-transcription, records, management, communication, telephone usage, research and use of reference materials, and human relations.

04.02 02 Office Machines

The study of the principles and procedures of developing proficiency in the use of office machines, and of applying machine skills to office problems.

04.02 03 Records Management

The study of information storage and retrieval processes, including automated and non-automated filing, microfilming systems, retention and disposal of records, equipment and space layout, and the supervision, standards, and work measurement in the records division of an organisation.

04.02 03 01 Filing

The study of the principles and procedures of coding, indexing, and filing, including the application of established rules to alphabetic, numeric, geographic, and subject filing systems.

04.02 03 02 Micrographics

The study of the principles and procedures of applying microforms to office operations, including the storage and retrieval of records on microfilm and microfiche.

04.02 04 Reprographics

The study of modern office duplication and copying equipment and systems, including the capabilities, feasibility, and use of various types of equipment and the techniques of master copy preparation.

04.02 05 Shorthand and Transcription

The study of the principles and techniques of recording dictation in symbol or other abbreviated form and the conversion of these abbreviated forms into typewritten documents using acceptable formats and correct spelling, punctuation, and grammar.

04.02 06 Specialised Secretarial Services

The study of the principles and techniques of applying secretarial procedures to specialised fields.

04.02 06 01 Bilingual Secretarial Services

The study of the principles and techniques necessary to perform satisfactorily the secretarial function in situations where fluency in speaking and writing two languages is required.

04.02 06 02 Legal Secretarial Services

The study of the special knowledge and skills needed by secretaries employed in legal firms, courts, or other situations related to the legal profession and the application of secretarial skills to legal office settings.

04.02 06 03 Medical Secretarial Services

The study of the special knowledge and skills needed by secretaries employed in medical practices and hospitals, and other situations related to the medical profession and the application of secretarial skills to medical practice settings.

04.02 06 04 Technical Secretarial Services

The study of the knowledge and skills necessary to perform secretarial functions in scientific, technological, or other technical office situations.

04.02 07 Typewriting

The study of the knowledge and skills necessary to operate a typewriter to produce personal and business correspondence and documents.

04.02 08 Word Processing

The study of the knowledge and skills needed to operate automated typing and transcription equipment, including the planning and production of correspondence, reports, and other documents.

04.02 99 Other Administrative and Office Services
 (Specify)

04.03 BANKING AND FINANCE

The study of the financial management of industrial, commercial and mining enterprises and financial institutions; of monetary and fiscal policy, and of investment analysis and portfolio selection.

04.03 01 Business Finance

The study of financial decision analysis, ratios, funds flow analysis and projection, time value of money, management of financial resources, credit and collection, policy, taxation, risk and uncertainty.

04.03 01 01 Business Financing Decisions

The study of the decisions taken in business financing, including the study of capital structure, debt capacity and policy, cost of capital, rate of interest, equity finance, dividend/retention policy, leasing, factoring, trade credit taken, bank credit, and financial strategy.

04.03 01 02 Business Investment Decisions

The study of the decisions taken in business investment, including investment project appraisal, capital budgeting, working capital management, cash budgeting, trade credit given, company valuation, diversification, mergers and acquisitions, and portfolio theory.

04.03 02 Consumer Finance

The study of consumer finance, including open account, hire purchase and instalment credit, personal loans, savings plans and facilities, endowment insurance, medical aid schemes, home ownership, and retirement plans.

04.03 03 Financial Institutions

The study of the purpose, principles, practices, and procedures of mining houses, the Industrial Development Corporation, insurance companies, pension and provident funds, building societies, and bank investment corporations.

04.03 04 International Finance

The study of the balance of payments, exchange rates, exchange control, foreign payments and credit instruments, the international capital market, foreign and euro-bonds, euro-currencies, international liquidity, the gold market, and foreign direct and portfolio investment.

04.03 05 Investment Analysis and Portfolio Management

The study of investment trusts and mutual funds, securities valuation, capital market theory, fundamental and technical analysis, and portfolio selection.

04.03 06 Monetary and Fiscal Policy

The study of the function of the supply of money and demand for cash balance, open market operations, discount policy, credit control, objectives and interaction of monetary and fiscal policies, inflation and deflation, cost and availability of credit, the rate of interest and the rate of exchange.

04.03 07 The Banking System

The study of commercial banks, merchant banks, savings banks, hire purchase banks, general banks, liquidity and asset structure of banks, sources of funds, types of credit, criteria for lending, banking legislation and control, and the Reserve Bank.

04.03 08 The Capital Market

The study of the operation of the capital market, including the study of sources of long-term investible funds, the Stock Exchange, financial institutions, equity and debt finance instruments, mortgage finance, bridging finance, sale-and-leaseback, collateral and matching finance.

04.03 09 The Money Market

The study of the money market, including the study of discount houses, the National Finance Corporation, money brokers, finance houses, acceptance credit, bill finance, negotiable certificates of deposit, and short-term public debt.

04.03 99 Other Banking and Finance (Specify)

- 04.04 BUSINESS DATA SYSTEMS

The study of the theories and applications of management information systems, and information systems that deal with business and are generally characterised by logical patterns of work flow from the point of original data gathering to completion of necessary reports and retrieval displays.

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04.05 ENTREPRENEURSHIP

The study of all the facets of starting and conducting an enterprise or business, while assuming full control and risk.

04.05 01 Minority Enterprises

The study of the special skills and knowledge needed to undertake the formation of a business enterprise by members of a minority group, including a study of the special legislation intended to aid such enterprises.

04.05 02 Private Ownership

The study of that part of the economic system that is not owned by the Government, characterised by companies, partnerships, and proprietorships.

04.05 02 01 Companies

The study of the principles, practices, and expertise needed to form, manage, and control a company, including the distribution of corporate powers, the financing of companies, and the role of directors and shareholders.

04.05 02 02 Partnerships

The study of the nature and purposes of businesses which are owned by two or more people, including their formation, obligations, management and dissolution.

04.05 02 03 Proprietorships

The study of the nature and purpose of a business enterprise which is completely owned, controlled, and managed by a single individual or a small group of people.

04.05 03 Public Ownership

The study of those companies which offer goods or services to the public and the bulk of whose stock is held by quasi-governmental bodies.

04.05 03 01 Non-profit Public Companies

The study of the principles which govern the distribution of shares in a non-profit company which operates under a policy by which no shareholder or trustee shares in the profits or losses of the enterprise.

04.05 03 02 Profitmaking Public Companies

The study of the principles which govern the distribution of the shares of stock in a publicly held company, including issuance of stock certificates, granting of options to employees, and payment of dividends.

04.05 99 Other Entrepreneurship (Specify)

04.06 INFORMATION COMMUNICATIONS

The study of the principles and techniques of obtaining and submitting information.

04.06 01 Business Communications

The study of the principles and techniques of compiling and transmitting business information.

04.06 02 Business Communication Systems

The study of the principles and techniques of operating business communications.

04.06 03 Information Communication Systems

The study of the nature and structure of organisations that specialise in transmitting information from senders to receivers, including an analysis of the services they provide.

04.06 03 01 Private Delivery Systems

The study of the organisation, management, methods and services of private communication delivery systems.

04.06 03 02 South African Postal System

The study of the organisation, management, functions, methods, procedures, and services of the South African postal service.

04.06 03 03 Telecommunications Systems

The study of the services, methods and procedures of organisations that provide electrical impulse communication systems such as telephone and telegraph.

04.06 04 Business Report Writing

The study of the principles and procedures of researching, organising, and interpreting information for business reports.

04.06 99 Other Information Communications (Specify)04.07 INSURANCE AND RISK MANAGEMENT

The study of risk analysis and personal and business insurance and their applications to life, disability, property, liability, and fiduciary trust and annuity underwriting.

04.07 01 Actuarial Science

The study of the principles of applying probability theory to insurance, including the basic principles of life, property, and casualty contingencies and the determination of annuity and insurance benefits, premiums, reserves, and expenses.

04.07 02 Casualty Insurance

The study of casualty coverages involved in automobile insurance; business, professional and personal liability insurance; housebreaking, robbery, and theft insurance; fidelity and surety bonds; disability insurance; and multiple line contracts.

04.07 03 Estate Planning

The study of life underwriting and programming problems, and the principles and methods of integrating life insurance, wills, trusts, business continuation agreements, and social security benefits into unified estate plans.

04.07 04 Fiduciary Trusts and Annuities

The study of various trusts and annuities as related to financial planning, including premium calculation, compound interest functions, and mortality tables.

04.07 05 Accident and Health Insurance

The study of the risk of economic loss by accident or disease and the various methods of handling such risks through health, hospitalization, or accident insurance.

04.07 06 Liability Insurance

The study of the principles of underwriting and of legal analysis of liability insurance contracts, rate-making, financial reserves, and claims adjustment.

04.07 07 Life Insurance

The study of the principles of life insurance, including analysis of policies, contract provisions, premiums and reserves, selection and underwriting, re-insurance, and legal considerations.

04.07 08 Principles of Insurance

The study of major types of insurance, including life, fire, accident and health, automobile, workmen's compensation, and transportation insurance, and fidelity and surety bonds.

04.07 09 Property Insurance

The study of the principles of property insurance, including fire insurance, the protection of mortgagee's interest, consequential loss coverage, allied fire lines and fire insurance rates, marine insurance, multiple line contracts, contract analysis, underwriting, and loss adjustment.

04.07 10 Risk Management

The study of risk management methods applicable to both personal and business non-speculative risk arising from life and health, as well as property and liability contingencies, including the role of Government relative to non-speculative risk.

04.07 11 Group and Social Insurance

The study of factors affecting economic security and the insurance mechanisms, both private and public, designed to meet economic security needs on a group basis, including social insurance, group insurance, medical aid schemes, social security, and retirement systems.

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04.07 12 Personal Insurance

The study of the principles of insurance as they apply to the average citizen, with emphasis on the types of policies available and the matching of policies to the needs and financial position of policyholders.

04.07 13 Insurance Law

The study of the legal doctrines and concepts that are applicable to the field of insurance, including contract law; parties to the contract; insurable interest; agency powers; waiver and estoppel; warranties, representation and concealments; the rights of the beneficiary; and provisions controlling and limiting loss.

04.07 14 Insurance Enterprise

The study of the principles of managing insurance companies and other risk-bearing enterprises, including self-insurance and captive insurance organisations.

04.07 99 Other Insurance and Risk Management (Specify)04.08 INTERNATIONAL BUSINESS

The study of export sales, trade controls, foreign operations, attitudes, monetary problems, and other areas of concern in the international business environment as it affects, or is affected by, a company's policies, procedures, and products.

04.09 MANAGEMENT

The study of planning, organising, and controlling a business, including organisational and human aspects, with emphasis on various theories of management, the knowledge and understanding necessary for managing people and functions, and decision-making.

04.09 01 Business Policy

The study of the nature and development of the principles and goals by which a company conducts its business.

04.09 02 Management Applications

The study of the application of management methods and techniques to all kinds and sizes of business and other organisations.

04.09 02 01 Administrative Management

The study of the theory, principles, and practice of organising, planning, and controlling the work of an organisation.

04.09 02 02 Industrial Management

The study of the nature and application of management methods and techniques related to manufacturing companies.

04.09 02 03 Institutional Management

The study of the nature and application of management methods and techniques related to specific kinds of institutions.

04.09 02 04 Middle Management

The study and analysis of the management responsibilities of junior executives and supervisory personnel, including employee-management relations, administration of company policies, interpretation of records, profit controls, and product movement.

04.09 02 05 Production Management

The study of the systematic regulation and control of the manufacturing, fabricating, extracting, or processing of goods.

04.09 02 06 Small Business Management

The study of management functions, policies, and procedures that are characteristic of small business concerns.

04.09 02 07 Transportation Management

The study of the management principles and procedures that are involved in moving goods from one place to another by rail, truck, bus or other conveyance.

04.09 03 Organisation Behaviour, Design and Development

The study of the behaviour of individuals, organisations, and their interaction, and the means of intervention that may be used to improve interpersonal relations, team behaviour and organisational effectiveness.

04.09 04 Principles and Theory of Management

The study of the conceptual basis, and principles and theories of controlling, planning, and regulating business and other organisations.

04.09 05 Principles and Theory of Organisation

The study of the concepts, principles, and theories of the inter-relationship of the structure, authority, goals, and operations of business and other organisations.

04.09 99 Other Management (Specify)04.10 MARKETING

The study of the principles, practices, and concepts involved in the performance of business activities which direct the transfer of goods and the acquisition of services from producer to consumer or user, including the study of marketing functions and institutions, activities having to do with effecting change in ownership and possession of goods and services.

04.10 01 General Marketing

The study of introductory marketing principles, practices, procedures, and concepts.

04.10 02 Marketing Economics

The study of the economic principles of marketing, including the study of micro-economics and macro-economics and economic decision-making of the individual business firm in relation to the industry of which it is a part.

04.10 03 Marketing Functions

The study of the principles, practices, and concepts involved in the major specialised activities and economic services inherent in directing the flow of goods from producer to consumer or user, including the functions of exchange, physical supply, and the facilitating functions.

04.10 03 01 Buying

The study of the process of concentrating or controlling goods to facilitate sale, purchase, production, or use, including buying for institutional consumption, for resale, for business use or industrial purposes, and procurement by the Government.

04.10 03 02 Financing

The study of the principles and concepts involved in providing and managing funds and credit which directly relate to the transactions involved in the flow of goods and services from producer to consumer or industrial user, including the provision and management of funds needed to finance the carrying of stocks and the granting of mercantile and retail credit, including instalment credit.

04.10 03 03 Marketing Research

The study of the principles, procedures, and concepts involved in gathering, recording, and analysing facts about problems relating to the sale and transfer of goods and services from producer to consumer, including the study of relationships and adjustments between production and consumption, preparation of commodities for sale, physical distribution, wholesale and retail merchandising, and financial problems.

04.10 03 04 Risk

The study of the principles and concepts involved in the assumption of financial responsibility for loss, including the study of risk classifications, methods of handling risks, and risk management.

04.10 03 05 Selling, Promotion, and Advertising

The study of the principles, practices, and concepts involved in the process of assisting and persuading a prospective customer to purchase a product or service, including personal selling, advertising, display, and sales promotion.

04.10 03 06 Standardisation and Grading

The study of the principles and concepts involved in the determination of basic specifications to which manufactured products must conform, and of classes into which the products of agriculture and extractive industries must be sorted, and the study of the process of sorting units of a product into the grades or classes established.

04.10 03 07 Storage

The study of the principles, practices, and concepts involved in the function of holding and preserving goods from the time of production to the time of final sale or re-manufacture.

04.10 03 08 Transportation

The study of the physical transfer of products from the place of production to the place of consumption, or to and from any intermediary points, and the planning, selection, and direction of the means and methods of transportation involved in the movement of goods in the marketing process.

04.10 04 Marketing Management

The study of the concepts, principles, practices, and procedures involved in planning, directing, and controlling the entire marketing activity of a firm or division of a firm including the formulation of marketing objectives, policies, programmes and strategies.

04.10 04 01 Distribution Management

The study of the concepts, principles, and practices involved in the development of marketing management policies and strategies relating to the selection of distribution channels, distribution patterns, and channel supervision.

04.10 04 02 Price Management

The study of the concepts, principles, and practices involved in the development of marketing management strategies relating to the pricing of products, including the study of pricing procedures, policies, and related legislation.

04.10 04 03 Product Management

The study of the concepts, principles, and practices involved in the development of marketing management policies relating to product planning, product identification, diversification, and product-line strategy.

04.10 04 04 Promotion Management

The study of the concepts, principles, and practices involved in the development of marketing management policies relating to the organization and management of personal selling, advertising, and sales promotion strategies, activities, and techniques.

04.10 05 Marketing of Products

The study of the principles, practices, procedures, and concepts of marketing individual or homogeneous classes of industrial, agricultural, and consumer products from the point of production or extraction to the point of consumption or use.

04.10 05 01 Agricultural Products

The study of the principles, practices, and concepts involved in the transfer or flow of agricultural products from the farmers to the central markets, manufacturers, middlemen, and final consumer, including the study of agricultural products classifications, co-operatives, commodity exchanges, auctions, and related legislation.

04.10 05 02 Consumer Products

The study of the principles, practices, and concepts inherent in and incident to the transfer and movement of consumer products from the point of production to the point of final consumption, including the study of consumer goods classification, consumer legislation, product management, pricing, promotion, and the physical distribution of individual or homogeneous classes of consumer products, including the facilitating functions of marketing.

04.10 05 03 Industrial Products

The study of the principles, practices, and concepts involved in the transfer or movement of industrial products from the initial producer or extractor to the final producer or industrial user, including the study of industrial goods classification, demand analysis, marketing channels, pricing, promotion, and related legislation.

04.10 06 Marketing of Services

The study of the principles, practices, procedures, and concepts of marketing intangibles that are bought and sold to industrial, agricultural, business, or home users, including activities, benefits, or satisfactions which are offered for sale or are provided in connection with the sale of goods.

04.10 06 01 Business Services

The study of the principles, practices, and concepts involved in marketing services to businesses, including such services as sales, promotion, buying, marketing research, marketing management and consulting, office, security, maintenance, and employment.

04.10 06 02 Financial Services

The study of the principles, practices, and concepts involved in the marketing of services performed by banks, finance companies, stock exchanges, brokerage firms, building societies and insurance and investment companies in providing financial services to businesses and personal consumers, including allocation, valuation, and management of financial resources.

04.10 06 03 Hospitality Services

The study of the principles, practices, and concepts involved in the marketing of services performed by restaurants, hotels, motels, travel agencies, and the recreation and tourism industry for business and personal consumers.

04.10 06 04 Insurance Services

The study of the principles, practices, and concepts involved in the marketing of risk protection for life, health, property, and liability losses to businesses and personal consumers.

04.10 06 05 Personal Services

The study of the principles, practices, and concepts in marketing services of a personal nature which serve the needs of individual consumers.

04.10 06 06 Real Estate Services

The study of the principles, practices, and concepts involved in buying, selling, appraising, renting, managing, and leasing of real property.

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04.10 07 Organisation of Marketing

The study of the principles, practices, and concepts of marketing activity as conducted at various institutional levels and bases of geographical scope, including the study of the organisation of the flow of ownership.

04.10 07 01 International Marketing

The study of the principles, practices, and concepts of marketing involved in exporting and importing, including the study of tariffs, embargoes, cartels, exchange rates, foreign markets, foreign investments, the role of foreign aid, and related legislation.

04.10 07 02 Manufacturing and Production

The study of the principles, practices, concepts, and functions of marketing, as conducted by the manufacturer or producer in directing the flow of goods to the industrial user or ultimate customer.

04.10 07 03 Marketing Integration

The study of the principles, practices, and concepts inherent in the process of vertical and horizontal integration of marketing activities and functions as related to industrial or business ownership.

04.10 07 04 Retailing

The study of the principles, practices, concepts, and functions of marketing, as conducted by the retailer in concentrating and selling products and services from the producer or middleman to the ultimate consumer.

04.10 07 05 Wholesaling

The study of the principles, practices, concepts, and functions of marketing, as conducted by the wholesaler in concentrating and dispersing products from the producer to the industrial user, retailer, or ultimate consumer.

04.10 99 Other Marketing (Specify)

04.11 PERSONNEL MANAGEMENT AND ADMINISTRATION

The study of the methods, principles, procedures, and understandings necessary to manage and administer programmes that are directed to the welfare and working conditions of employees in a business or other organisation.

04.11 01 Compensation

The study of the salaries of executives and managers, the commissions earned by salesmen, and the wages of workers in factories, mines, stores, restaurants, and all other forms of economic organisations.

04.11 02 Evaluation Techniques

The study of the principles and procedures for implementing job evaluation programmes, including systems of organised evaluation, job ranking, rating devices, performance reviews, and the effect of evaluation on personnel supervision and administration.

04.11 03 Human Relations

The study of the principles and techniques of measuring and improving an employee's effectiveness in relating to customers, to other employees, and to persons outside the work environment.

04.11 04 Labour-Management Relations

The study of the history and development of the labour movement, including an analysis and interpretation of the relevant legislation, union contracts, labour negotiation, conciliation, arbitration, and grievance procedures.

04.11 04 01 Collective Bargaining

The study of the process in which workers bargain as a unit with management in regard to wages, hours, and basic conditions of employment.

04.11 04 02 Contract Administration

The study of the methods, techniques, and process by which union-management contracts are carried out.

04.11 05 Recruitment, Selection, and Separation

The study of the various methods and practices by which business organisations find the personnel which they need, and by which employment is terminated.

04.11 06 Supervision

The study of superior-subordinate relationships and practices in business and industry, including techniques of employee induction, morale building, follow-up and evaluation, correction, grievances, and an analysis of leadership and motivation.

04.11 07 Training and Development

The study of the principles, organisation, and techniques of individual and group training, including the development of initial and follow-up programmes, department and sales meetings, practice training in skills, and acquisition of information.

04.11 08 Welfare and Safety

The study of the principles and practices followed by an employer of promoting the health, safety, and welfare of the employees through better work procedures, machinery, and rest periods.

04.11 99 Other Personnel Management and Administration
(Specify)

04.12 QUANTITATIVE METHODS

The study of the mathematical and statistical methods and models which business organisations use to understand themselves and the environment, and to gain the maximum effectiveness and efficiency of their resources.

04.12 01 Business Research Methods

The study of the principles and methods of investigating business facts and problems to find more effective means of conducting a business.

04.12 02 Management Science

The study of the application of mathematical and analytical techniques such as modelling, programming, forecasting, and analysis in the design, implementation, monitoring, and control of organisational processes and operations to determine their purpose and effectiveness, and means for attaining maximum efficiency.

04.12 03 Operations Research

The study of the principles and procedures of analysing management problems utilising probability theory, continuous distributions, mathematical programming, queueing theory, Markov processes, replacement maintenance and inventory models, other mathematical models, and simulation and game theory.

04.12 99 Other Quantitative Methods (Specify)

04.13 REAL ESTATE

The study of the theory and techniques of buying, selling, appraising, renting, managing, and leasing of real property.

04.13 01 Appraisal and Valuation

The study of the techniques of general appraisal of the real estate market, including factors that affect the value of land, construction costs per square metre and cubic metre, factors in residential and commercial appraisals, and the translation of rental income into present value.

04.13 02 Land Use Controls

The study of the various means of regulating, controlling, or directing the way in which real property is used.

04.13 03 Principles of Real Estate

The study of the principles and procedures involved in the ownership and transfer of real property, including titles, liens, mortgages, contracts, brokerage, and legal rules governing real estate.

04.13 04 Property Management

The study of the principles and methods of managing investment property, including office buildings, flats, and industrial and retail premises.

04.13 05 Real Estate Economics

The study of the economic trends and factors which effect the value of real estate, including the role of economics in planning, the factors influencing the demand and supply of various types of real estate, the economic trends and factors which effect the value of real estate, the economics of property development, the nature of the real estate market and the pricing mechanism.

04.13 06 Real Estate Finance

The study of principles and practices governing real estate financing, including the concept of risk, equity finance, debt finance, lease finance, sources of finance, loan procedures and relevant legislation.

04.13 07 Real Estate Investments

The study of the principles and procedures of selecting or creating various types of commercial, industrial and residential property for investment purposes; the study of the principles of their location; the study of operating expense; and the study of depreciation and other determinants of net income.

04.13 08 Real Estate Law

The study of the legal principles governing real estate transactions, including sale and lease contracts, title deeds, mortgages and insurance contracts; and the study of the law of agency as applied to real estate.

04.13 09 Real Estate Practice

The study of day-to-day operations in real estate including letting, current cost ratios, advertising, current financing costs, code of conduct and ethics governing participation in real estate as a principal, agent or consultant.

04.13 99 Other Real Estate (Specify)

04.99 OTHER BUSINESS, COMMERCE AND MANAGEMENT SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

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05 COMMUNICATION
Subject matter concerned with the structure and processes involved in the creation, transmission, and evaluation of messages.

05.01 ADVERTISING

The study of the creation, execution, transmission, and evaluation of paid community and commercial messages concerned with the promotion and sale of products, services and ideas by means of mass media.

05.01 01 Advertising Evaluation

The study of the measurement of advertising messages using primary data, media research data, and surveys to determine the success of product or service functions in advertising campaigns.

05.01 02 Advertising Management

The study of the methods of obtaining and evaluating information necessary for decision-making and control of advertising strategy.

05.01 03 Advertising Media

The study of the selection and implementation of the various vehicles for advertising messages, including the role of advertising agencies.

05.01 04 Advertising Production

The study of methods and application of concepts in producing and transmitting messages in advertising through print, electronic, direct mail media, and point of purchase situations.

05.01 05 Copywriting

The study of the techniques of reproducing written matter or art work in printed form for advertisements or publicity releases.

05.01 99 Other Advertising (Specify)

05.02 CODE SYSTEMS

The study of the structure and usage of verbal and non-verbal symbols and signs in human communication.

05.02 01 Non-verbal Communication

The study of communication signs apart from verbal communication.

05.02 02 Semiology

The study of the meaning and structure of words.

05.02 99 Other Code Systems (Specify)

05.03 COMMUNICATION METHODOLOGY

The study of the appropriate research designs, research techniques such as content analyses, and applications whereby empirically verified facts about the phenomenon of communication are added to the existing body of knowledge.

05.04 COMMUNICATION TECHNOLOGY

The study of the application of technology to communication.

05.04 01 Communication Networking

The study of the process of interconnecting communication equipment, often involving the geographic distribution of diverse communication systems.

05.04 02 Print Publication Technology

The study of optical scanning of copy and electronic editing methods used to eliminate errors and speed production in the newsroom.

05.04 03 Satellite Communication

The study of man-made celestial bodies that orbit the earth and their use in public and private communication.

05.04 99 Other Communication Technology (Specify)

05.05 CYBERNETICS

The study of the general laws of control and communication common to animal, man and machine for the use of human beings.

05.05 01 Communication Systems

The study of communication from the general systems perspective, including man-machine communication as well as all interactive systems.

05.05 02 Information Systems

The study of the general structure and properties of systems and the theory and methods for the transfer, storage, retrieval, evaluation and distribution of information.

05.05 99 Other Cybernetics (Specify)

05.06 FILM AS COMMUNICATION (See 03.02 - Film as Art)

The study of the historical development, aesthetic qualities, and creative process of the motion picture image as a narrative, documentary, or experimental form.

05.06 01 Film and Public Policy

The study of the laws and regulations governing motion pictures as a public medium.

05.06 02 Film in Education

The study of the nature, history, and use of the motion picture as an educational instrument.

05.06 03 Film Production

The study and exercise of the principles and techniques of creating motion pictures.

05.06 03 01 Acting in Film

The study of the principles and techniques used in performing the role of a living character before a motion picture camera.

05.06 03 02 Cinematography

The study and practice of reproducing images on motion picture film.

05.06 03 03 Directing for Film

The study and practice of planning, co-ordinating, and implementing scenes before a motion picture camera.

05.06 03 04 Editing for Film

The study and practice of selecting and arranging motion picture film footage to achieve a creative expression.

05.06 03 05 Film Graphics

The study and practice of creating motion pictures through the manipulation of inanimate materials.

05.06 03 06 Film Sound

The study and practice of recording, mixing, and joining sound to motion pictures.

05.06 03 07 Production Management in Film

The study and practice of organising materials and personnel to achieve a complete motion picture.

05.06 03 08 Writing for Film

The study and practice of principles and techniques used in creating written material for motion picture film.

05.06 04 History of Film as Communication

The study of the evolution and development of the motion picture medium as a socio-economic cultural phenomenon.

05.06 05 Theory and Criticism of Film as Communication

The study of the methods and standards for judging the quality of motion picture film and film making as an instrument of mass communication.

05.06 99 Other Film as Communication (Specify)

05.07 GOVERNMENTAL AND STATE COMMUNICATION

The study of the communication policies and practices of governmental departments, institutions and organisations

05.07 01 Communication and Social Movements

The study of communication processes related to the developments, spreading and effects of movements aimed at social and political change in society.

05.07 02 Diffusion of Information and Innovations

The study of the principles, practices and problems related to the communication and adoption of information in areas such as agriculture, health, education etc. aimed at the betterment of the quality of life.

05.07 03 Political Communication

The study of communication in the total political process related to the institution of government of a society.

05.07 99 Other Governmental and State Communication (Specify)

05.08 INNOVATIVE COMMUNICATION

The study of innovative forms of mass communication, including technical and science writing and non-print media.

05.08 01 Non-print Media

The study of the development and use of non-print communication materials, forms, and media such as microfilm slides and audio and video tapes.

05.08 02 Technical Communication

The study of principles and methods used in oral or written exposition of scientific and technical materials.

05.08 99 Other Innovative Communication (Specify)

05.09 INTERNATIONAL COMMUNICATION

The study of the principles and methods of imparting or interchanging between countries thoughts, opinions, or information by speaking, writing, codes, and other means.

05.09 01 Intercultural Communication

The study of communication among individuals and groups of different cultural backgrounds.

05.09 02 International Negotiations

The study of the acts or processes involved in communications which seek to settle or make arrangements or agreements suitable to countries.

05.09 03 International Organisations

The study of the goals, structure, function, communication process and effects of non-profit international co-operative organisations.

05.09 04 International Propaganda

The study of the communication employed by a nation in an effort to further its cause or to damage an opposing cause.

05.09 99 Other International Communication (Specify)

05.10 INSTRUCTIONAL COMMUNICATION

The study of communicative factors involved in the teaching-learning process.

05.10 01 Teaching Media

The study of the principles and techniques involved in the usage of audio-visual teaching aids.

05.10 99 Other Instructional Communication (Specify)

05.11 INTERPERSONAL COMMUNICATION

The study of the process of communication between two or more people in a face-to-face situation.

05.11 01 Group Communication

The study of communication in the small group situations, especially with regard to group dynamics and the processes of decision-making, problem-solving and conflict management.

05.11 99 Other Interpersonal Communication (Specify)

05.12 JOURNALISM

The study of the principles and methods of gathering, processing, evaluating, and disseminating, through mass media, information about current events and issues.

05.12 01 Critical and Persuasive Writing

The study of the principles and techniques which can be effectively employed in such written forms as editorials, reviews, and interpretive analyses for evaluative or persuasive purposes.

05.12 02 Editorial Processes

The study of principles and methods of selecting, processing, and evaluating news and editorial content in the mass media, particularly in the light of audience or readership needs and responses.

05.12 03 Electronic Journalism

The study of the principles and techniques of planning, creating, and transmitting informational or news-related messages through the electronic process, particularly by radio and television.

05.12 04 Evaluative Writing

The study of the methods of implementing the standards set by professional ethics and societal norms through editorial writing and critical reviews of public performances.

05.12 05 Feature and In-depth Writing

The study of the principles and techniques of gathering and disseminating, through mass media, facts, opinions, and ideas which are primarily interesting, explanatory, or analytical.

05.12 06 Journalism History

The study of the beginnings, development, and changes which have occurred in the mass media, and the economic, political, social, and technical influences which have affected them.

05.12 07 Journalism Laboratory

The study of the methods, techniques, and theories of journalism, performed in a laboratory environment to simulate real-life conditions.

05.12 08 News Reporting and Writing

The study of the nature and importance of news and the methods for obtaining and preparing news for transmission through mass media.

05.12 09 Photographic Journalism

The study of the theory and processes of using sensitised film to create visual and informational images for the transmission of messages.

05.12 99 Other Journalism (Specify)

05.13 MASS COMMUNICATION

The study of the structure, function and societal effects of the communication institutions in the field of mass media of society.

05.13 01 Media Science

The study of communication media.

05.13 02 Public Opinion

The study of the factors which influence the development, spread and change of ideologies and opinions prevalent within a society, as well as the techniques used to gauge such opinions.

05.13 99 Other Mass Communication (Specify)

05.14 ORGANISATIONAL COMMUNICATION

The study of communication within a structured system of relationships that co-ordinates the efforts of a group of people toward the achievement of specific objectives, as well as communication between the organisation and its environment.

05.14 01 Conflict Management

The study of the role of communication in the development and control of conflict.

05.14 02 Pragmatic Communication

The study and practice of communication as a means to influence and facilitate interaction and decision-making.

05.14 02 01 Argumentation

The study of the processes involved in the development of ideas through reasoned discourse.

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05.14 02 02 Debate and Forensics

The study of the application of forms of argument to test ideas or reach decisions.

05.14.02 03 Discussion and Conference

The study of the principles and procedures employed in problem-solving and decision-making groups.

05.14 02 04 Parliamentary Procedure

The study of codes and rules for the conducting of meetings or organizations in a democratic society, including, but not limited to, legislative bodies.

05.14 02 05 Persuasion

The study of the principles and strategies of communication that are intended to modify attitudes and actions.

05.14 99 Other Organisational Communication (Specify)

05.15 PRINT MEDIA

The study of the principles, techniques, and requirements of using the printed media in the communication process; including, but not restricted to, pamphlets, newspapers, periodicals, and books.

05.16 PROFESSIONAL PRACTICES IN COMMUNICATION

The study of the history and status of legal, ethical, and societal restraints on, and the guarantees for, the communicator.

05.17 PUBLIC RELATIONS

The study of planned efforts to influence and maintain the favourable opinion of internal and external "publics" through acceptable performance, honestly presented, with reliance on two-way communication and substantial use of the mass media.

05.18 RADIO

The study of the history, theories, and functions of radio in reaching mass audiences.

05.18 01 Radio and Public Policy

The study of the laws and regulations governing radio broadcasting as a public medium.

05.18 02 Radio Production

The study and exercise of principles and techniques used in creating radio programmes.

05.18 03 Radio Programming

The study of the principles and techniques used in developing formats for scheduling radio broadcasts and evaluating audience response.

05.18 04 Writing for Radio

The study and practice of the principles and techniques used in creating written materials for radio broadcast.

05.18 99 Other Radio (Specify)

05.19 SPEECH COMMUNICATION

The study of the nature, processes, and effects of human verbal and accompanying non-verbal transmission of messages.

05.19 01 Oral Interpretation

The study of literature through performance involving the development of skilled verbal and non-verbal expression based on critical analysis of written texts.

05.19 01 01 Aesthetics of Literature in Performance

The study of the philosophy of art as it applies to and enhances the performance and evaluation of literature.

05.19 01 02 Criticism of Literature in Performance

The study of the analysis and evaluation of literary texts in performance.

05.19 01 03 Group Performance

The study of modes of adaptation and oral presentation of a literary text by two or more persons including performances utilising music, sound, dance, and other paralinguistic effects.

05.19 01 04 Oral Tradition

The study of the performance of various forms of verbal art in non-literate and literate societies.

05.19 02 Public Address

The study of speakers and speeches, including the historical and social context of platforms, campaigns, and movements.

05.19 03 Rhetoric

The study of the ways, methods and tactics in which men may influence each other's thinking and behaviour through the use of symbols.

05.19 04 Speech Communication Education

The study of speech communication in pedagogical contexts.

05.19 04 01 Communication Development

The study of the acquisition and use of speech communication skills by normal children.

05.19 04 02 Oral Communication Skills

The study of strategies for improving individual competencies in speaking and listening.

05.19 05 Speech and Hearing Science

The study of the physiological and acoustical correlates of speech and hearing behaviour.

05.19 05 01 Biological Aspects of Speech and Hearing

The study of the anatomy and physiology of speech and hearing mechanisms.

05.19 05 02 Phonological and Phonetic Aspects of Speech and Hearing

The study of the production and perception of verbal and non-verbal human sounds.

05.19 05 03 Physical Aspects of Speech and Hearing

The study of acoustic characteristics of motor speech production and of auditory perception.

05.19 99 Other Speech Communication (Specify)

05.20 SPECIAL COMMUNICATION

The study of special communication needs and the systems designed to enhance communicative abilities for persons handicapped in one or more of the modes of communication.

05.20 01 Braille

The study of a system of raised dots for touch reading and writing by the blind, derived from an arrangement of six dots referred to as the braille cell.

05.20 02 Manual Communication

The study of communication by means of systematic use of signs and symbols, made with the hands and body, including various signed language systems and finger spelling to convey and receive information.

05.20 03 Speech Reading

The study of knowledge and skills designed to develop student competencies in understanding the speaker's message through visual attention.

05.20 99 Other Special Communication (Specify)

05.21 TELEVISION

The study of the history, theories, and functions of television in reaching mass audiences.

05.21 01 Television and Public Policy

The study of the laws and regulations governing television as a public medium.

05.21 02 Television Effects

The study of the psychological, social, cultural, economical and educational effects of television as mass communication medium as well as the effects of different kinds of programmes.

05.21 03 Writing for Television

The study and practice of the principles and techniques of creating written material for television.

05.21 99 Other Television (Specify)

05.99 OTHER COMMUNICATION (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

06 COMPUTER SCIENCE AND DATA PROCESSING

Subject matter concerned with the coding, processing, and storage of data through repetitious and highly complex mathematical operations at high speed, and in accordance with strictly defined systems and procedures.

06.01 APPLICATIONS IN COMPUTER SCIENCE AND DATA PROCESSING

The study of the application of computer science and data processing to induction and hypothesis formulation, cognitive and perceptual processes, learning and adaptive systems, problem solving, or simulation of natural systems.

06.01 01 Artificial Intelligence

The study of the execution by automatic means of procedures or operations associated with human intelligence including perception, recognition, organization, action, and assessment of impact.

06.01 02 Computer Graphics

The study of the input, construction, storage, retrieval, manipulation, alteration, and analysis of pictorial data.

06.01 03 Instructional Applications

The study of the use of computers for instructional purposes as in computer assisted instruction, computer managed instruction, computer based instruction, and test analysis.

06.01 04 Pattern Recognition

The study of the identification of shapes, forms, or configurations by means of computers as used in fingerprint analysis and character recognition.

06.01 99 Other Applications in Computer Science and Data Processing (Specify)

06.02 COMPUTER OPERATIONS AND OPERATIONS CONTROL

The study of the procedures necessary for managing, securing, and operating computer equipment and for processing data.

06.02 01 Computer Operation

The study of the physical tasks required to operate a computer and its related peripheral equipment.

06.02 02 Data Control

The study of techniques of managing the flow of input and output documents through a computer centre.

06.02 03 Data Entry

The study of the techniques of converting original data into a machine-readable form, such as keypunching or other forms of data transcription.

06.02 04 Records Management

The study of techniques designed to provide economy and efficiency in the creation, organisation, maintenance, use, and disposition of recorded data.

06.02 05 Unit Record Operation

The study of techniques of operating equipment that processes data recorded on punched cards such as card sorters, collators, and tabulators.

06.02 99 Other Computer Operations and Operations Control
(Specify)

06.03 COMPUTER HARDWARE SYSTEMS

The study of the use of and interrelationships between computers, input and output devices, data storage devices, control units, and related equipment.

06.03 01 Computer Architecture

The study of the techniques of design and assembly of computing logic units and devices into a computing system.

06.03 02 Networking

The study of the process of interconnecting computing equipment, often involving geographic distribution of user terminals and diverse computer systems.

06.03 03 Processing Modes

The study of distinct computing methods such as card-oriented batch processing, keyboard-oriented batch processing, remote job entry, time-sharing, interactive computing, on-line inquiry, and message switching.

06.03 99 Other Computer Hardware Systems (Specify)

06.04 COMPUTER HARDWARE

The study of the mechanical, magnetic, electrical, electronic, and other devices and components of computers and other data processing equipment.

06.04 01 Central Processing Units

The study of that part of a computing system which contains the circuits that control and perform the execution of instructions, usually containing the main storage and arithmetic and logic units.

06.04 02 Communication Control Devices

The study of message switching equipment, remote terminal controllers, concentrators, multiplexers, and other electronic message handling devices.

06.04 03 Memory Hierarchies

The study of the functional and performance characteristics of various storage media and their relationships within a computer system.

06.04 04 Microprocessors

The study of the architecture, logic, and program characteristics of central processing units which are implemented on single or, at most, very few large-scale integrated circuits.

06.04 05 Peripheral Devices

The study of various units and devices that usually are connected to and used in combination with a central processor such as input and output devices and storage devices, including tape and disk drives, terminals, card readers and punches, printers, and plotters.

06.04 06 Unit Record Equipment

The study of equipment which processes data recorded in punched cards, including card sorters, collators, and tabulators.

06.04 99 Other Computer Hardware (Specify)

06.05 INFORMATION AND DATA BASE SYSTEMS

The study of methods for creating, organising, storing, and accessing organised files of information.

06.05 01 Data Base Specifications

The study of the computer specifications and standardisations of data systems languages, such as through the Conference on Data Systems Languages (CODASYL).

06.05 02 Data Base Management Systems

The study of computer software systems which handle the storage, changing, and retrieval of records in an organised file.

06.05 03 Data Base Security

The study of the procedures required to protect data bases from unauthorised access, modification, or destruction.

06.05 04 File Organisation and Manipulation

The study of procedures used for organising data elements and files to develop optimum use of storage and ensure rapid retrieval such as sequential, random, and indexed access methods, and indexed file structures.

06.05 05 Generalised Report Techniques

The study of methods for developing software that processes specific words and symbols used to define any of a variety of report formats, resulting in the generation of computer instructions that produce the defined report, utilising previously established data files.

06.05 06 Information Retrieval and Search Techniques

The study of methods for searching large files, usually bibliographies, for reference to key specification topics.

06.05 07 Sequential and Random Access Methods

The study of storage techniques in which the stored items of information become available only in a one-after-the-other sequence, whether or not all the information or only some of it is desired, and the study of the storage techniques which permit direct access to any stored item regardless of its position.

06.05 08 Relational Data Bases

The study of the relationships that are defined among various data record types.

06.05 99 Other Information and Data Base Systems (Specify)

06.06 NUMERICAL COMPUTATIONS

The study of methods for obtaining useful quantitative solutions to problems that have been expressed mathematically, including the study of the errors and bounds on errors in obtaining such solutions.

06.06 01 Computational Algorithms

The study of methods for achieving solutions to classes of numerical problems using the computer.

06.06 02 Computational Error Analysis

The study of the cause and effect of errors that result from computer arithmetic, rounding, or truncation.

06.06 03 Mathematical Software

The study of methods for producing reliable, portable, quality programs designed to solve classes of mathematical or numerical problems.

06.06 99 Other Numerical Computations (Specify)

06.07 PROGRAMMING LANGUAGES

The study of different sets of symbols and the rules for combining them into instructions which can ultimately be used by a computer.

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06.07 01 Command Languages

The study of the programming language which is recognised by the computer to make it operate.

06.07 02 Decision Table Languages

The study of the programming language that is a part of a decision table programming system.

06.07 03 List Processing Languages

The study of specific languages developed for manipulation of symbols and strings of symbols such as LISP and SNOBOL.

06.07 04 Problem or Special Purpose Languages

The study of programming languages designed for a single objective, and programming languages which define, specify, and solve problems, such as RPG.

06.07 05 Procedure-oriented Languages

The study of programming languages that are particularly suited to the process of solving general problems, such as FORTRAN, BASIC, COBOL, and APL.

06.07 06 Simulation Languages

The study of programming languages that are designed for modelling specific kinds of systems; such as GASP, DYNAMO, and SIMSCRIPT.

06.07 07 Symbolic and Algebraic Manipulation Languages

The study of programming languages that are used for manipulating algebraic or symbolic expressions, such as ALTRAN and FORMAC.

06.07 08 Instructional Programming and Author Languages

The study of languages designed for programming computers to assist with instruction, often providing special features for authors of computer-based learning materials, such as COURSEWRITER, PLAN IT, and TUTOR.

06.07 99 Other Programming Languages (Specify)

06.08 PROGRAMMING SYSTEMS

The study and design of programs, programming languages, and sets of coded instructions directing a computer to perform a series of operations.

06.08 01 Assemblers

The study of machine-dependent computer programs that translate structured symbolic statements of an assembly language into machine instructions.

06.08 02 Compilers

The study of computer programs that translate machine-dependent, structured, symbolic higher level language statements into machine instructions.

06.08 03 Interpreters

The study of computer programs that translate structured symbolic statements of a programming language for immediate statement-by-statement processing.

06.08 04 Job Control Languages

The study of computer programming languages which aid users of a specific data processing system to describe the requirements of a task, or series of tasks, to that system.

06.08 05 Macrolanguages

The study of computer programming languages that make use of sets of machine-language instructions to perform specific data processing functions by aggregation into simpler instructions (macros).

06.08 06 Operating Systems

The study of organised collections of techniques and procedures for allocating resources within a computer system.

06.08 07 Performance Measurement and Evaluation

The study of techniques for testing and comparing the performance of computer systems by the use of such techniques as benchmarking and simulation.

06.08 08 Systems Security

The study of computer programs designed to maintain the integrity of programming systems and to prevent unauthorised access or damage to such systems.

06.08 09 Virtual Memory Systems

The study of techniques that permit a computer user to treat secondary storage as an extension of main memory, thus giving the appearance of a larger memory system.

06.08 99 Other Programming Systems (Specify)

06.09 SOFTWARE METHODOLOGY

The study of the methods and techniques of designing and producing computer programs.

06.09 01 Coding and Testing

The study of methods of preparing in code, or pseudocode, a list of the successive computer operations (computer program) required to solve a specific problem, and techniques for verifying the correctness of the computer programs.

06.09 02 Documentation and Documentation Standards

The study of the procedures for providing a record of the function, data requirements, output, usage, and description of a computer program or system of programs, and the standards for such procedures.

06.09 03 Programming Techniques

The study of methods and procedures for the efficient development of well-structured programs; such as structured programming, modular programming and top-down programming.

06.09 04 Systems Analysis

The study of the principles and techniques involved in the design of large-scale computer programs including modelling, flowcharting, data organisation, and the impact of the programs on organisational objectives.

06.09 05 Systems Design

The study of the procedures for generating detailed specifications of the steps outlined by a systems analyst.

06.09 06 Time, Cost, and Feasibility Studies

The study of procedures for estimating the length of time and the cost required to produce a computer program; such as the use of Program Evaluation Review Techniques (PERT) and other critical path methods.

06.09 99 Other Software Methodology (Specify)

06.10 THEORY OF COMPUTATION

The study of abstract mathematical models of computing machines.

06.10 01 Analysis of Algorithms

The study of algorithm complexity and problem complexity. The former is concerned with consideration of a specific algorithm for solving a problem and the analysis of its behaviour with respect to the amount of memory and other resources used. The latter is concerned with the class of algorithms for solving a particular problem and the determination of the minimum requirements of the problem with respect to time, memory, or other resources.

06.10 02 Computability and Decidability

The study of conditions under which a given problem can be solved on a given abstract machine and the conditions under which it is possible to make such determinations.

06.10 03 Formal Languages

The study of abstract mathematical objects used to model the syntax of programming languages or of natural languages such as English or Afrikaans.

06.10 04 Proof of Program Correctness

The study of mathematical techniques for proving that a given computer program actually solves a specific problem.

06.10 05 Theory of Automata

The study of the abstract mathematical models which are idealised machines called "automata", such as Turing machines.

06.10 99 Other Theory of Computation (Specify)

06.11 EDUCATIONAL, SOCIETAL, AND CULTURAL CONSIDERATIONS

The study of any aspects of computer science and data processing which have an impact on education, society, and culture, such as legal implications, right to privacy, and computer theft.

06.11 01 Computer Literacy

The study of the non-technical aspects of the capabilities and limitations of computers, including some of the social, cultural, vocational, economic, and educational implications of computers.

06.11 02 History of Computer Science and Data Processing

The study of the historical development of computers, of computer science, and data processing.

06.11 03 Basic Concepts of Computer Science

The study of basic concepts of computers, computer systems, programming, and programming systems

06.11 04 Basic Concepts of Data Processing

The study of computers and computer programming, especially as they apply to the problems arising from business and commercial applications.

06.11 99 Other Educational, Societal, and Cultural Considerations (Specify)

06.99 OTHER COMPUTER SCIENCE AND DATA PROCESSING (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

07 EDUCATION

Subject matter concerned with the science and practice of educating the generations towards maturity.

07.01 FOUNDATIONS OF EDUCATION

The study of all educational aspects and basic concepts upon which South African education is based.

07.01 01 Educational Theory

The study of the theoretical foundations of education, including general pedagogical, historical, comparative, philosophical, didactical, psychological, sociological, physical, orthopedagogical and informatory perspectives on pre-school, primary, secondary, tertiary and adult levels.

07.01 02 Cultural Foundations

The study of the impact and relationship between the subsystems of society and education.

07.01 99 Other Foundations of Education (Specify)**07.02 EDUCATIONAL ADMINISTRATION**

The study of principles and techniques of planning, organising, developing, staffing, co-ordinating, managing, researching, evaluating, financing and controlling educational institutions and agencies.

07.02 01 Principles and Theories of Educational Administration

The study of the basic theories and principles of organising, managing, developing, staffing and financing educational institutions and agencies.

07.02 02 Educational Facilities and Material

The study of the principles and practices of planning, organising, staffing, maintaining, purchasing, co-ordinating, and managing the physical plant and equipment of educational institutions and agencies.

07.02 03 Educational Finance

The study of the principles and practices of obtaining and allocating educational finance, of evaluating educational finance systems and procedures for the distribution of educational funds.

07.02 04 Educational Leadership

The study of the theories, methods, principles, and practices of directing, controlling, and administering the personnel of educational institutions and agencies.

07.02 05 Educational Management

The study of the principles and techniques of management, and methods of organising, planning and controlling the daily operations of an educational institution or agency.

07.02 06 Educational Organisation and Control

The study of the theories, methods, principles, and practices of organising and governing the constellation of informal and formal activities that characterise educational institutions and agencies.

07.02 07 Educational Personnel and Staffing

The study of the principles and practices of interviewing, selecting, promoting, motivating, compensating, and terminating the professional and support personnel of educational institutions and agencies.

07.02 08 Educational Planning

The study of the methods, theories, and techniques for making judgments, predictions and designs for the future of educational institutions and agencies.

07.02 99 Other Educational Administration (Specify)

07.03 SYSTEMS OF EDUCATION

The study of the principles upon which plans, methods, and structures for providing instruction are established and maintained.

07.03 01 Pre-primary Education Systems

The study of the principles upon which preprimary education systems are established and maintained.

07.03 02 Primary Education Systems

The study of the principles upon which primary education systems are established and maintained.

07.03 03 Secondary Education Systems

The study of the principles upon which secondary education systems are established and maintained.

07.03 04 Tertiary Education Systems

The study of the principles upon which tertiary education systems are established and maintained.

07.03 05 Vocational - Technical Education Systems

The study of the principles upon which vocational-technical education systems are established and maintained.

07.03 06 Private Education Systems

The study of the principles upon which private education systems are established and maintained.

07.03 07 Adult-Continuing Education Systems

The study of the principles upon which adult and continuing education systems are established and maintained to meet the unique needs of adults and youth who are beyond the age of compulsory school attendance and who have either completed or interrupted their formal education.

07.03 99 Other Systems of Education (Specify)

07.04 TEACHING - SUBJECT MATTER

The study of the theory, methods and techniques involved in teaching specific subject matter (using the Structure of the Classification of Educational Subject Matter).

07.04 01 Agriculture and Renewable Natural Resources

The study of the theory, methods and techniques involved in teaching the subject matter of Agriculture and Renewable Natural Resources.

07.04 02 Architecture and Environmental Design

The study of the theory, methods, and techniques involved in teaching the subject matter of Architecture and Environmental Design.

07.04 03 Arts, Visual and Performing

The study of the theory, methods, and techniques involved in teaching the subject matter of Arts, Visual and Performing.

07.04 04 Business

The study of the theory, methods, and techniques involved in teaching the subject matter of Business.

07.04 05 Communication

The study of the theory, methods, and techniques involved in teaching the subject matter of Communication.

07.04 06 Computer Science and Data Processing

The study of the theory, methods, and techniques involved in teaching the subject matter of Computer Science and Data Processing.

07.04 07 Education

The study of the theory, methods, and techniques involved in teaching the subject matter of Education.

07.04 08 Engineering and Engineering Technology

The study of the theory, methods, and techniques involved in teaching the subject matter of Engineering and Engineering Technology.

07.04 09 Health Care and Health Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Health Care and Health Sciences.

07.04 10 Home Economics

The study of the theory, methods, and techniques involved in teaching the subject matter of Home Economics.

07.04 11 Industrial Arts, Trades, and Technology

The study of the theory, methods, and techniques involved in teaching the subject matter of Industrial Arts, Trades, and Technology.

07.04 12 Language, Linguistics, and Literature

The study of the theory, methods, and techniques involved in teaching the subject matter of Language, Linguistics, and Literature.

07.04 13 Law

The study of the theory, methods, and techniques involved in teaching the subject matter of Law.

07.04 14 Libraries and Museums

The study of the theory, methods, and techniques involved in teaching the subject matter of Libraries and Museums.

07.04 15 Life Sciences and Physical Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Life Sciences and Physical Sciences.

07.04 16 Mathematical Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Mathematical Sciences.

07.04 17 Military Sciences

The study of the theory, methods, and techniques involved in teaching the subject matter of Military Sciences.

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07.04 18 Philosophy, Religion, and Theology

The study of the theory, methods, and techniques involved in teaching the subject matter of Philosophy, Religion, and Theology.

07.04 19 Physical Education, Health Education, and Leisure

The study of the theory, methods, and techniques involved in teaching the subject matter of Physical Education, Health Education, and Leisure.

07.04 20 Psychology

The study of the theory, methods, and techniques involved in teaching the subject matter of Psychology.

07.04 21 Public Administration and Social Services

The study of the theory, methods, and techniques involved in teaching the subject matter of Public Administration and Social Services.

07.04 22 Social Sciences and Social Studies

The study of the theory, methods, and techniques involved in teaching the subject matter of Social Sciences and Social Studies.

07.04 99 Other Teaching - Subject Matter (Specify)

07.05 TEACHING - PROGRAMMES

The study of the theory, methods, and techniques of selecting, designing, implementing and evaluating teaching and learning programmes, or programmes of interrelated activities in an educational setting.

07.05 01 Agricultural Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, and retrain students in agricultural occupations.

07.05 02 Career Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which provide assistance to students in planning and preparing for a career.

07.05 03 Co-operative Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which provide students with on-the-job training and co-ordinated school instruction.

07.05 04 Distributive Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which provide students with various combinations of subject matter and learning experiences related to the flow of goods and services from the producer to the consumer or ultimate user.

07.05 05 Health Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, and retrain students in a wide range of health maintenance and health care occupations.

07.05 06 Home Economics Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, and retrain students for occupations requiring the knowledge and skills of home economics subject matter.

07.05 07 Office Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, and retrain students in selected office occupations.

07.05 08 Technical Education

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, or retrain students for a cluster of job opportunities in specialised, technical fields or occupations.

07.05 09 Trade and Industrial Occupations

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, or retrain students in a wide range of trade and industrial occupations.

07.05 10 Reading and Language Arts Programmes

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, or retrain students in reading and the language arts.

07.05 11 Bilingual Education Programmes

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, or retrain students in English or Afrikaans and another language which may be their native tongue.

07.05 12 Extra-curricular Programmes

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which are under the sponsorship of a school, but for which participation is generally not required and credit is generally not awarded.

07.05 13 Driver Education Programmes

The study of the theory, methods, and techniques of designing, implementing, and evaluating programmes which prepare, upgrade, or retrain students in the skills and learning experiences necessary for the safe operation of a motor vehicle.

07.05 99 Other Teaching - Programmes (Specify)

07.06 TEACHER TRAINING

The study of the principles and techniques of preparing teachers for pedagogical and instructional activities, including the activities of practice teaching.

07.07 COUNSELLING AND GUIDANCE

The study of the theory, methods, functions, and services involved in the personal, social, educational, and vocational development of students.

07.07 01 Principles and Theories of Counselling and Guidance

The study of the principles, theories, and methods of serving the personal, social, educational, and vocational needs of students.

07.07 02 Academic Counselling and Guidance

The study of the theory, methods, functions, and services that are provided for students who seek assistance in making specific choices regarding their educational progress towards a career.

07.07 03 Career Information and Counselling

The study of the theory, methods, functions, and services that are provided to students who seek assistance in selecting and pursuing a career.

07.07 04 Clinical Experience

The study of the principles and techniques of applying counselling and guidance theories, methods, functions, and services to student clients in educational settings.

07.07 05 Counselling Services

The study of programmes, and services that are provided to students in educational institutions and other agencies for the purpose of helping to direct their judgement or conduct.

07.07 06 Group Processes and Procedures

The study of the theories, methods, and techniques for leading, organising, and conducting counselling activities that involve several student clients at the same time.

07.07 07 Organisation and Administration of Counselling and Guidance

The study of the principles and techniques of structuring, managing, directing, and controlling organisations, institutions, agencies, and departments that provide counselling and guidance services.

07.07 08 Professional Development

The study of principles and techniques of providing continuing education experiences to further professional growth in counselling and guidance staff.

07.07 99 Other Counselling and Guidance (Specify)

07.08 SPECIAL EDUCATION PROGRAMMES

The study of the theory, methods, and techniques of designing, implementing, and evaluating organised learning activities and instructional programmes for students whose physical, emotional, mental, or social needs require a special curriculum and educational setting.

07.08 01 General Study of Special Education Programmes

The study of the general theory and practise of orthopedagogical and/or orthodidactical settings which are required to meet the ends of a special educational situation.

07.08 02 Autistically Handicapped

The study of the theory, methods, and techniques of designing, implementing, and evaluating organised learning activities and teaching programmes for students who are so severely disturbed in their communication that their educational performance is adversely affected.

07.08 03 Emotionally Handicapped

The study of the theory, methods, and techniques of designing, implementing, and evaluating organised learning activities and teaching programmes for students who are emotionally disturbed or delinquency prone as a result of inadequate and/or incorrect education.

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07.08 04 Gifted and Talented

The study of the theory, methods, and techniques for designing, implementing, and evaluating organised learning activities and teaching programmes for students whose mental development and talent are so advanced that they require additional educational opportunities beyond those normally provided by the regular school programme.

07.08 05 Aurally Handicapped

The study of the theory, methods, and techniques of designing, implementing, and evaluating organised learning activities and teaching programmes for students who have an impairment in hearing that adversely affects their educational performance.

07.08 06 Crippled

The study of the theory, methods, and techniques of designing, implementing, and evaluating organised learning activities and teaching programmes for students who are crippled to the extent that it adversely affects their educational performance.

07.08 07 Epileptic

The study of the theory, methods, and techniques of designing, implementing, and evaluating organised learning activities and teaching programmes for students who get epileptic attacks to the extent that it adversely affects their educational performance.

07.08 08 Multiple Physically Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organised learning activities and teaching programmes for students who have a combination of physical handicaps that adversely affect their educational performance.

07.08 09 Neurologically handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organised learning activities and instructional programmes for students who have brain damage, brain disfunction, cerebral palsy or some other neurological handicap that adversely affects their educational performance.

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07.08 10 Visually Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organised learning activities and teaching programmes for students who have a visual impairment which adversely affects their educational performance.

07.08 11 Mentally Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organised learning activities and teaching programmes for students whose impaired mental development adversely affects their educational performance.

07.08 12 Speech Handicapped

The study of the theory, methods, and techniques for designing, implementing, and evaluating organised learning activities and teaching programmes for students who have a speech impairment or a language impairment which adversely affects their educational performance.

07.08 99 Other Special Education Programmes (Specify)

07.09 COMMUNITY SERVICE

The study of the theory, methods, and techniques of combining school and community resources to provide information, teaching, and recreation for all members of a community.

07.09 01 Communication

The study of the theory, methods, and techniques of utilising available media to disseminate information about educational activities throughout the community.

07.09 02 Community Relations

The study of the theory, methods, and techniques of communicating information about school activities to parents and members of the community for the purpose of maintaining positive and mutually beneficial relationships.

07.09 03 Community Facilities and Activities

The study of the principles and techniques involved in planning, supervising, and utilising the school plant for community activities and programmes which usually take place outside the normal school day.

07.09 99 Other Community Service (Specify)

07.10 EDUCATIONAL DEVELOPMENT

The study of the theory, methods, and techniques of evaluating and implementing change processes in the organisation, programmes, staff, operations, and activities of educational systems.

07.10 01 Experimentation and Innovation

The study of the theory, methods, and techniques of critically evaluating new ideas, technology, and systems to be applied for the intended improvement of education.

07.10 02 Staff Development

The study of the principles, methods, and techniques of providing professional and personal growth in an educational environment.

07.10 99 Other Educational Development (Specify)

07.11 EDUCATIONAL EVALUATION AND RESEARCH

The study of principles, procedures and methodology of searching for new knowledge and providing information about theoretical and practical education.

07.11 01 Planning and Design

The study of the principles and procedures of planning and designing educational change, action and new systems.

III-07-14

07.11 02 Methodology

The study of the principles, procedures and techniques of conducting educational research, design, and evaluation.

07.11 03 Educational Measurement

The study of theories, principles and techniques of measuring educational effectiveness and efficiency.

07.11 99 Other Educational Evaluation and Research (Specify)

07.12 EDUCATIONAL TECHNOLOGY AND MEDIA

The study of the design, construction, operation, and maintenance of various mechanical and electronic devices, tools, and applications that are intended to contribute to the educational process.

07.12 01 Instructional Systems Design

The study of the principles and techniques involved in building instructional programmes through the systematic use of available technology and instructional methods.

07.12 02 Educational Media and Materials Production

The study of the principles and techniques of applying forms of media to the process of instruction and to the production of educational materials.

07.12 03 Television Applications to Education

The study of the principles and techniques of applying the technology of television to such educational processes as instruction, administration, and evaluation.

07.12 99 Other Educational Technology and Media (Specify)

07.99 OTHER EDUCATION (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

08 ENGINEERING AND ENGINEERING TECHNOLOGY

Subject matter aimed at preparation for the practice of Engineering - the profession in which knowledge of the mathematical, natural and engineering sciences is gained by study and experience in practice and is applied with judgement to develop ways of economically utilizing the materials and forces of nature for the benefit of mankind; and Engineering Technology - that part of the engineering field involving the application of scientific and engineering knowledge and methods combined with technical skills which lies in the occupational spectrum between the craftsman and the engineer.

08.01 AEROSPACE AND AERONAUTICAL ENGINEERING AND TECHNOLOGY

The study of the design, construction, operation and maintenance of aircraft, space vehicles and power units; the special problems of flight in both the earth's atmosphere and space, including the flight of air vehicles and the launching, guidance, and control of missiles, earth satellites, space vehicles and probes.

08.01 01 Aerodynamics

The study of the motion of air and other gaseous fluids and the forces acting on bodies when they move through such fluids, or when such fluids move against or around the bodies.

08.01 02 Aeronautics

The study of the structure and flight of aircraft.

08.01 03 Astronautics

The study of spacecraft thrust systems such as propulsion, launching, orbiting, and rendezvous; spaceflight; solar-system destinations; and biological effects that travel in space has on man or other organisms.

III-08-02

08.01 04 Air Frame Structures

The study of the design and construction of an aeroplane, spacecraft, or missile, including the fuselage, wings, empennage, nacelle, and landing gear, but not power plants, furnishings, or equipment.

08.01 05 Flight Dynamics

A study of aircraft performance and flight paths.

08.01 06 Ground and Air Support

The study of the construction, operation and use of flight maintenance vehicles and support units.

08.01 07 Propulsion Systems

Study of the design, production, operation and maintenance of drives used in powering aircraft and spacecraft.

08.01 08 Vehicle Guidance

The study of the control devices used in guiding an aircraft or spacecraft and of the apparatus which generates and detects the path along which a vehicle or craft is often remotely and automatically guided.

08.01 99 Other Aerospace and Aeronautical Engineering and Technology (Specify)08.02 AGRICULTURAL ENGINEERING AND TECHNOLOGY

The study of the design, construction, operation, and maintenance of structures, equipment, machinery, and energy devices for the purpose of improving the production of food and fibre.

08.02 01 Agricultural Energy and Power

The study of the principles and techniques for making effective use of energy such as electricity and wind on farms and other agricultural establishments, including the development, maintenance, and operation of energy and power equipment.

08.02 02 Agricultural Materials Handling

The study of the methods and techniques for handling, by mechanical, electrical or other means, materials used in agricultural enterprises.

08.02 03 Agricultural Storage

The study of the methods and technology for preserving and maintaining agricultural products through such means as refrigeration, packaging, drying, and chemical pressurisation.

08.02 04 Agricultural Transportation

The study of the methods of moving agricultural products from one location to another, giving consideration to such matters as economics and quality preservation.

08.02 05 Agricultural Waste Control

The study of the processes involved in constructing, using, maintaining, and controlling agricultural waste systems.

08.02 06 Farm Machinery

The study of the principles and techniques involved in the production, selection, operation, and maintenance of agricultural machinery and equipment.

08.02 07 Farm Structures

The study of the principles and techniques of planning, designing, erection, and maintaining farm and other agricultural buildings.

08.02 08 Food Processing Machinery

The study of the principles and techniques involved in the production, selection, operating, and maintenance of machinery used in gathering, treating, packaging and distributing agricultural products.

08.02 09 Soil and Water Resources

The study of the principles and techniques involved in the artificial application of water to arable land for agricultural use, maintenance of soil fertility, and utilisation of water resources.

08.02 99 Other Agricultural Engineering and Technology
(Specify)

08.03 AUTOMOTIVE ENGINEERING AND TECHNOLOGY

The study of the principles and techniques involved in designing and producing land transportation vehicles such as automobiles, trucks, and tracked units.

08.04 BIO-ENGINEERING AND TECHNOLOGY

The study of the application of engineering and technological concepts, principles, and practices to human and other living systems.

08.04 01 Biochemistry (See 15.04 03 - Biochemistry)

The study of the chemical composition of and processes in living matter and biological phenomena.

08.04 02 Biomaterials

The study of the physical properties of materials related to living matter and biological phenomena.

08.04 03 Biomechanics (See 19.02 01 - Biomechanics)

The study of the mechanics of living things.

08.04 04 Biomedical Systems

The study of the interrelationship of the elements of biology, medical technology and life support systems.

08.04 05 Biophysics (See 15.07 09 02 - Biophysics)

The study of the relationship between the physical principles underlying the structures of living organisms and the mechanics of life processes.

08.04 99 Other Bio-engineering and Technology
(Specify)

08.05 CHEMICAL ENGINEERING AND TECHNOLOGY

The study of the nature of chemical processes, heat and mass transfers and the design and development of processes by which raw materials can be converted into desirable products by changing the composition of any or all the materials in bulk.

08.05 01 Polymers

The study of the nature and development of substances made up of giant molecules that are formed by the union of simple molecules.

08.05 02 Process Control and Simulation

The study of the principles and techniques of forcing change in chemical-physical properties and imitating chemical reactions and processes.

08.05 03 Thermodynamics and Kinetics

The study of the principles and application of the chemical aspects of heat and mechanical changes in physical systems.

08.05 04 Unit Operations

The study of the principles and techniques of purifying and separating petroleum, ores, or chemical mixtures into their component parts.

08.05 05 Transport Phenomena

The study of the principles of heat, mass, momentum, and energy transport or transfer.

08.05 99 Other Chemical Engineering and Technology
(Specify)08.06 CIVIL ENGINEERING AND TECHNOLOGY

The study of the conceptual planning, analysis, design, construction, testing, operation and maintenance of structures, transportation components and systems, water resource utilisation, treatment and conveyance systems, pollution control systems, and appurtenant works.

08.06 01 Construction Engineering

The study of the principles and techniques of planning, executing, and controlling construction operations for such projects as roads, dams, buildings, and other heavy structures.

08.06 02 Highway and Road Engineering

The study of the principles and techniques of surveying, route location, testing roadway materials, recommending alternate locations, and preparing plans and specifications for the construction of highways and other roads.

08.06 03 Hydraulic and Water Engineering

The study of engineering characteristics and control of dams, rivers, waterways, harbours, coastlines, etc.

08.06 04 Hydrology (See 15.05 04 - Geohydrology)

The study of the occurrence, circulation, distribution, and properties of the waters of the earth, and the reaction between them and the environment.

08.06 05 Materials of Construction

The study of the characteristics, properties, and use of various materials in the construction of civil engineering projects.

08.06 06 Sanitation Engineering

The study of the principles and methods of protecting and promoting public health through water purification and sewage treatment.

08.06 07 Soil Mechanics and Foundations

The study of the application of the laws of solid and fluid mechanics to soils and similar granular materials as a basis for the design, construction, and maintenance of stable foundations and earth structure.

08.06 08 Structural Engineering

The study of the principles and techniques of structural analysis, design, and synthesis of structures constructed of materials such as reinforced concrete, structural steel, etc.

08.06 09 Transportation Engineering

The study of the transport of goods and people utilising roads, waterways, railways, and pipelines, including traffic regulation and safety.

08.06 99 Other Civil Engineering and Technology
(Specify)08.07 COMPUTER ENGINEERING AND TECHNOLOGY

The study of the principles and techniques of designing and producing the mechanical, magnetic, electrical, and electronic elements of computer hardware and supporting systems.

08.08 ELECTRICAL ENGINEERING AND TECHNOLOGY

The study of the theory and applications of electrical and electronic systems and their components, including circuits, electromagnetic fields, and energy sources.

08.08 01 Digital Methods

The study of use of electrical digital methods and their application to logic circuits.

08.08 02 Electromagnetic Circuits

The study of lumped and distributed linear and non-linear electrical parameters and their behaviour.

08.08 03 Electromechanical Controls

The study of output and feedback components and their characteristics and applications in open-loop and closed-loop systems.

08.08 04 Electronics

The study of the application and control of the conduction of electricity through gases, or vacuum, or through semi-conducting or conducting materials.

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08.08 05 Fields and Waves

The study of the characteristics and application of electromagnetic systems related to energy and information processing.

08.08 06 Electronic Information Theory

The study of the nature and characteristics of signals and noise as related to electronic communication systems.

08.08 07 Electrical Instrumentation

The study of the design, manufacture, and utilisation of devices and systems for detection, observation, measurement, display control, computation, communication, or data processing.

08.08 08 Power and Energy

The study of the generation, transmission, and distribution of power and energy and of the utilisation of electrical power and energy devices and systems, as well as of electro-mechanical energy conversion systems.

08.08 99 Other Electrical Engineering and Technology
(Specify)08.09 GRAPHICS AND DRAFTING FOR ENGINEERING AND TECHNOLOGY

The study of the communication of ideas through lines, symbols, drawings, and other graphical tools utilising descriptive geometry, graphical analysis, and nomography, including details associated with equipment, dimensioning, and tolerances.

08.10 ENGINEERING MECHANICS

The study of the theory and practical application of kinematics and kinetics; the action of forces on static and moving bodies.

08.10 01 Continuum Mechanics

The study of the mathematical representation of the elastic and plastic actions of physical systems under the influence of forces.

08.10 02 Fluid Mechanics

The study of fluids at rest and in motion; forces, velocities and accelerations in compressible and incompressible fluids.

08.10 03 Solid Mechanics

The study of structural components and devices that predict and control the behaviour of solid physical systems under actions of stress.

08.10 04 Statics and Dynamics

The study of the predictive theory of the behaviour and control of physical systems and devices under actions of forces.

08.10 99 Other Engineering Mechanics (Specify)08.11 ENGINEERING SCIENCE

The study of the usefulness of the knowledge of such subject matter as physics, chemistry, biology and mathematics in engineering.

08.12 ENVIRONMENTAL ENGINEERING AND TECHNOLOGY

The study of the principles and techniques of identification and reduction of pollution, contamination, and deterioration of the natural environment, including the methodology for corrective action.

08.12 01 Air Pollution Control

The study of the means of identifying and treating polluting sources in order to maintain a desired degree of air quality.

08.12 02 Noise Pollution Control

The study of the means of identifying and treating noise pollution sources to minimise noise levels.

08.12 03 Solid Waste Control

The study of the means of aggregation, collection, treatment, and disposal of debris from natural and man-made processes.

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08.12 04 Water and Sewage Control

The study of the identification and treatment of the sources of pollution of water such as sewage and industrial wastes so as to meet acceptable standards for a desired environment.

08.12 99 Other Environmental Engineering and Technology
(Specify)08.13 GEOLOGICAL ENGINEERING

The study and practical application of scientific principles related to the physical history of the earth, the rocks and soils of which it is composed, and the physical changes in its structure.

08.14 INDUSTRIAL ENGINEERING AND TECHNOLOGY

The study of the organisation of integrated systems of people, money, materials, and equipment for the purpose of optimising production processes.

08.14 01 Facilities Layout

The study of the principles and techniques of conceiving and planning production facilities and processes, including the structural and parametric values of the system.

08.14 02 Human Factors in Industry

The study of the response characteristics of the human mind and body, and the influence of those characteristics on the interaction of people and machines.

08.14 03 Operations Research (See 04.12 03 - Operations Research)

The study of the application of mathematical modelling and feedback control theory to the interactions which occur in processes involving people, machines, and organisations.

08.14 04 Production Planning and Control

The study of the underlying principles, and the techniques and systems used to predict production schedules and completions, and to measure and maintain control over the processes of production.

08.14 05 Quality Assurance

The study of the testing and inspection of all, or a portion of, the final product, to ensure that desired product quality reaches the customer.

08.14 06 Work Measurement

The study of the techniques of creating, describing, and measuring the integrated duties, skills, knowledge, and responsibilities assigned to an employee or employees in a work setting.

08.14 99 Other Industrial Engineering and Technology
(Specify)

08.15 INSTRUMENTATION ENGINEERING AND TECHNOLOGY

The study of the techniques of designing, manufacturing, and utilizing display devices and systems for detection, observation, measurement, control, computation, communication, or data processing.

08.16 MANUFACTURING ENGINEERING AND TECHNOLOGY

The study of the design, construction, and application of machinery, tools, and processes used in manufacturing.

08.16 01 Manufacturing Processes

The study of the design, construction, and application of machinery and techniques in a continuous and predetermined manner for the creation of products.

08.16 02 Materials Handling

The study of the processes and equipment used in handling manufacturing materials with emphasis on mechanisation and automation.

08.16 03 Packaging Engineering

The study of the techniques of providing protection for an article or group of articles against damage during transportation or storage.

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08.16 04 Production Engineering

The study of the application of planning and optimisation techniques to the processes and devices used in the production of goods and services.

08.16 05 Tool Engineering

The study of the design, production, and integration of machines, machine tools, and special dies, jigs, and instruments used in manufacturing.

08.16 99 Other Manufacturing Engineering and Technology
(Specify)08.17 MARINE ENGINEERING AND NAVAL ARCHITECTURE

The study of the principles and techniques of design, construction, installation, maintenance, and operation of vehicles and equipment operating on or in the water.

08.17 01 Marine Equipment

The study of the principles and techniques of designing, producing, and maintaining equipment that is intended for use in a marine environment.

08.17 02 Navigation

The study of the principles and technology involved in directing the movement of a watercraft so that it will reach its intended destination, including position fixing, dead reckoning, pilotage, and homing.

08.17 03 Marine Propulsion

The study of the design, production, operation, and maintenance of engines and related equipment used in powering watercraft.

08.17 04 Ship Structures

The study of the structural characteristics of ships, including such elements as strength, flexibility, access, and capacity.

08.17 05 Underwater Techniques

The study of the special characteristics of marine equipment and processes that are used in underwater operations.

08.17 99 Other Marine Engineering and Naval Architecture
(Specify)

08.18 MATERIALS ENGINEERING AND TECHNOLOGY

The study of the structure, reactions, functions, and synthesis of metals, ceramics, plastics, textiles, pulp and paper, wood, and other materials, including the effects of their properties on systems and objects that are constructed from the specified materials.

08.18 01 Ceramics Engineering and Technology

The study of the principles and techniques of designing, developing, and controlling processes that are involved in the manufacture of clay and ceramic-ware, porcelain, china, pottery, and related substances.

08.18 02 Metal Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of metals and alloys.

08.18 03 Paper and Pulp Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of paper and pulp.

08.18 04 Plastics Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of polymeric materials.

08.18 05 Textiles Engineering and Technology

The study of the structure, reactions, functions, properties, and synthesis of textiles.

08.18 99 Other Materials Engineering and Technology
(Specify)

08.19 MECHANICAL ENGINEERING AND TECHNOLOGY

The study of the design, construction, maintenance, and operation of mechanical products and related systems, including production machinery, energy conversion devices, and vehicles.

08.19 01 Air Conditioning, Heating, Ventilation, and Refrigeration Engineering

The study of the design, development, manufacture, and maintenance of equipment which uses processes to control and adjust temperature, humidity, and air circulation.

08.19 02 Automatic Control

The study of the principles and techniques of equipment control by the use of preset or feedback methods in order to achieve a desired equipment performance.

08.19 03 Energy Conversion

The study of processes by which energy is transformed into useful work, including steam engineering, fuel and combustion analysis, steam and gas turbines, industrial power plant equipment, and internal combustion engines.

08.19 04 Fluid Power

The study of hydraulics and pneumatics, including power conversion, transmission, utilisation, and control in both stationary and mobile installations.

08.19 05 Manufacturing Processes

The study of the design, construction, and application of machinery and techniques in a continuous and predetermined manner for the creation of products.

08.19 06 Mechanical Design

The study of the design, development, manufacture, and maintenance of mechanical and other equipment as required for complete machine performance.

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08.19 07 Power Engineering

The study of the generation, transmission, and utilisation of energy, including the theory, design, construction, operation, maintenance and servicing of machines and devices for the conversion of energy into useful forms.

08.19 08 Thermal and Fluid Sciences

The study of the properties of heat and fluids and the use of these properties to secure optimum performance in equipment and processes.

08.19 99 Other Mechanical Engineering and Technology
(Specify)

08.20 METALLURGICAL ENGINEERING AND TECHNOLOGY

The study of the development and control of processes for extraction of metals from their ores and metal refining, the properties of metals and alloys, and the manufacturing and processing of metals.

08.20 01 Engineering Welding

The study of the principles and techniques involved in joining two ferrous and non-ferrous metals and alloys by applying heat to melt and fuse them.

08.20 02 Extraction Metallurgy

The study of the principles and techniques of extracting metals from their ores by hydro-metallurgic, pyrometallurgic processes and various chemical, mechanical and other methods.

08.20 03 Metal Forming

The study of the techniques of shaping metals by means of casting, extrusion, and stamping.

08.20 04 Mineral Dressing

The study of the techniques of improving the chemical or physical properties of an ore so that metal or other valuable materials can be recovered at a profit.

III-08-16

08.20 05 Mineral Processing

The study of the design, operation, and maintenance of equipment for enriching ores to the end product stage.

08.20 06 Physical Metallurgy

The study of the crystals, micro-structure, and properties of ferrous and non-ferrous metals and alloys.

08.20 99 Other Metallurgical Engineering and Technology
(Specify)08.21 MINING ENGINEERING AND TECHNOLOGY

The study of the principles, techniques and procedures for locating and appraising mineral deposits, and for designing the equipment and the processes for extracting minerals.

08.21 01 Exploitation Systems

The study of applicability of methods of extraction and their integration into systems of exploitation of ore deposits.

08.21 02 Mine Design

The study of the design, development, financing and programming of procedures required for effective mine operation.

08.21 03 Mine Plant

The study of mechanical systems of loading and transportation adapted to requirements of surface and underground mines.

08.21 04 Mine Ventilation

The study of mine atmospheres and air circuits, both natural and artificially created.

08.21 05 Mineral Exploration

The study of the techniques and methods involved in locating and appraising mineral deposits.

08.21 06 Rock Mechanics

The study of the properties and behaviour of constituents of the earth's crust under the influence of induced and applied stresses associated with mining operations.

08.21 99 Other Mining Engineering and Technology
(Specify)08.22 NUCLEAR ENGINEERING AND TECHNOLOGY

The study of the design, development, manufacture, construction, installation, maintenance, and repair of mechanical plants and equipment for the release, control, and utilisation of nuclear energy.

08.22 01 Fuel Separation and Reprocessing

The study of the principles and techniques of separating isotopes and removing poisons from fissionable materials.

08.22 02 Nuclear Instrumentation

The study of the design and construction of instruments for detection, observation, measurement, and automatic control of nuclear processes.

08.22 03 Radiation Control

The study of the methods, procedures, and techniques for maintaining a safe level of radiation, external to the reactor, by making use of a comparison with a standard.

08.22 04 Radiation Damage

The study of the effects of nuclear bombardment of materials within reactors.

08.22 05 Reactor Engineering

The study of the characteristics and arrangement of devices containing fissionable material in sufficient quantity as to be capable of maintaining a controlled, self-sustaining nuclear fission chain reaction.

08.22 06 Reactor Operation

The study of the techniques necessary to ensure efficient and safe operation of reactors, at the same time achieving maximum flux and output.

08.22 99 Other Nuclear Engineering and Technology
(Specify)

08.23 OCEAN ENGINEERING

The study of wave action upon sea structures, equipment, and materials, including the development of instrumentation to determine the forces and accelerations of such action.

08.24 PETROLEUM ENGINEERING

The study of the processes of discovering petroleum reserves, and of recovering and refining crude oil and gas, including the design, development, construction, installation, maintenance, and repair of related physical facilities.

08.24 01 Petroleum Exploration

The study of the principles and techniques involved in discovering petroleum reserves, and in recovering oil or gas from petroleum reserves.

08.24 02 Petroleum Refining

The study of the principles and techniques of obtaining usable fractions through processing complex crude oils.

08.24 99 Other Petroleum Engineering (Specify)

08.25 SURVEYING AND MAPPING

The study of the determination and identification of the shape, contours, location, and dimensions of land or water and their features.

08.25 01 Land Surveying and Subdivision

The study of the techniques of measuring land and its features and the utilisation of land, including planning, layout, description, and setting of land boundaries.

08.25 02 Engineering and Construction Surveying

The study and use of surveying techniques in engineering and construction processes.

08.25 03 Geodesy and Geodetic Surveying

The study and measurement of large portions of the earth's surface, using astronomical, cartographical, and surveying methods.

08.25 04 Photogrammetric Topographic Surveying

The study of making of maps using photographic methods.

08.25 05 Remote Sensing and Environmental Surveying

The study of geographic and environmental features utilising information from aerial photography, satellites, and related opto-electronic devices and systems.

08.25 06 Cartography

The study of the principles and techniques involved in designing, planning, and constructing maps.

08.25 99 Other Surveying and Mapping (Specify)08.99 OTHER ENGINEERING AND ENGINEERING TECHNOLOGY
(SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

09 HEALTH CARE AND HEALTH SCIENCES

Subject matter concerned with the restoration or preservation of health through the use of drugs, surgical operations, manipulations, or other curative or remedial methods.

09.01 BASIC HEALTH CARE SCIENCES

The study of the body structures and functions of human and animals, the principles and techniques of identifying and classifying diseases which affect them, and the foundation of scientific knowledge that is essential to the restoration and preservation of health.

09.01 01 Health Care Anatomy

The study of the structure and parts of the human and animal body, including the tissues, organs, and systems, and their relationship to the restoration and preservation of good health.

09.01 01 01 Dental Anatomy

The study of the structure and macroscopic and microscopic analysis of human and animal teeth and the interrelationship of their parts.

09.01 01 02 Gross Anatomy

The study of the structure of all regions of the human and animal body by means of dissection and X-ray.

09.01 01 03 Micro-anatomy

The study of the structure of the human and animal body, including the organisation of cells, tissues, and organs, using stained sections, light microscopy, and electron micrography.

09.01 01 04 Ocular Anatomy

The study of the structure and parts of the human and animal eye, and their interrelationship to the process of seeing.

09.01 02 Biochemistry (See 15.04 03 - Biochemistry)

The study of the nature and chemical composition of the substances that make up human and animal bodies, the changes in these substances, and the energy associated with those changes.

09.01 03 Chemical Pathology

The study of the application of chemical knowledge and techniques to specimens from the human and animal body to provide information to assist in the prevention, diagnosis, prognosis, and treatment of disease.

09.01 04 Diagnostics

The study of the principles and techniques of determining, by examinations, the nature and circumstances of a diseased condition in animals or humans.

09.01 05 Embryology (See 15.03 05 - Embryology)

The study of the formation, development, structure, and functional activities of embryos and fetuses: organisms in the earlier stage of development as before emergence from the egg or before metamorphosis or before birth.

09.01 06 Epidemiology

The study of the nature, treatment and prevention of epidemic diseases and parasitisms which affect large numbers of people and/or animals at the same time, spreading directly or indirectly by means of living vectors or fomites from person to person, person to animal, animal to person or animal to animal in localities where they were not prevalent previously.

09.01 07 Medical Genetics

The study of the resemblances and differences of related organisms resulting from the interaction of their genes and their environment, and the application of such knowledge to the restoration and preservation of good health.

09.01 08 Haematology

The study of the nature, functions, and diseases of blood and blood-forming organs and tissues in animals and humans.

III-09-03

09.01 09 Histology (See 15.03 08 - Histology)

The study of the microscopic structure, composition, and function of tissues in animals and humans.

09.01 10 Oral Hygiene

The study of techniques of providing oral prophylaxis, applying medication, and providing dental health education services, both for chairside patients and in community health programmes, under the supervision of a dentist.

09.01 11 Hygiene

The study of the conditions and practices that are conducive to the preservation of good health in humans and animals.

09.01 12 Immunology

The study of the phenomena of immunity from disease and parasites, the production of such immunity in humans and animals, induced sensitivity, allergy and immunopathology.

09.01 13 Contagious Diseases

The study of the nature and treatment of diseases which are communicable by infection as from one human or animal to another, of from one part of the body to another.

09.01 14 Microbiology (See 15.03 11 - Microbiology)

The study of the nature and properties of micro-organisms and of the disease processes they induce in humans and animals.

09.01 14 01 Bacteriology

The study of the growth, morphology, physiology, taxonomy, ecology, and host-parasite relationships of bacteria - particularly those which cause disease in humans or animals.

09.01 14 02 Mycology (See 15.03 16 - Mycology)

The study of the morphology, physiology, taxonomy, and ecology of fungi - particularly those that cause disease in humans or animals.

III-09-04

09.01 14 03 Parasitology (See 15.03 13 - Parasitology)

The study of human and animal parasites that live on or in an organism of the same or another species, from the body of which it obtains nutriment, and to which it frequently spreads disease.

09.01 14 04 Virology

The study of the morphology, genetics, physiochemical properties, and ecology of viruses and the diseases they cause in humans and animals.

09.01 15 Health Care Nutrition

The study of the act or process by which humans and animals take in and utilise food material, and the health consequences of lacking good nutrition.

09.01 16 Oral Biology

The study of the development, aging, structure, and function of the orofacial region and surrounding structures of the human or animal body.

09.01 17 Pathology

The study of the cause and effect of diseases in humans and animals with emphasis on the structural and functional changes which develop during the disease process, and the systematic methods of detecting these changes.

09.01 17 01 Cytology

The study of the structure, form, and functions of cells in humans and animals, and of the techniques of microscopic examination of cells taken from a body surface to detect cellular change.

09.01 17 02 Neuropathology

The study of the pathology of the nervous system, including the study of functional and structural changes and diseases that affect this system in humans and animals.

09.01 17 03 Ocular Pathology

The study of the functional and structural changes and diseases that affect the eyes in humans and animals.

III-09-05

09.01 17 04 Oral Pathology

The study of the functional and structural changes as well as diseases that affect the area of the mouth and jaws.

09.01 17 05 Anatomical Pathology

The study in humans and animals of pathology by means of necropsies and macroscopic and microscopic examination of diseased organs or tissues.

09.01 18 Pharmacology

The study of the therapeutic and toxic effects of drugs, including pharmacodynamic behaviour, metabolism, interactions with other chemicals, and the biochemical and physiological effects on the human or animal body.

09.01 19 Health Care Physiology

The study of the organic processes or functions of living organisms or their parts, and their relationship to the restoration and preservation of good health.

09.01 20 Radio-assay

The study of the principles and techniques of using radioactive tracers and radiation detection methods to measure biological activity in tissues of humans and animals.

09.01 21 Radiobiology

The study of the effects of light and ultraviolet and ionising radiations on living tissues or organisms.

09.01 22 Serology

The study in humans and animals of the properties of sera, and their preparation and use in the diagnosis, prevention, and treatment of disease, as well as for the detection of specific proteins.

09.01 23 Toxicology

The study of the nature, source, identification, and characteristics of poisons, toxic substances, and exogenous chemical agents which can cause death, illness, or injury upon contact with, or ingestion into the body, including the detection and measurement of their effects and the use of antidotes and other curatives in humans and animals.

09.01 99 Other Basic Health Care Sciences (Specify)

09.02 CLINICAL HEALTH SCIENCES

The study of the principles and procedures used in the observation, diagnosis, care, and treatment of illness, disease, injury, deformity, or other anomalies in humans and animals.

09.02 01 Cardiology

The study of the structure of the heart and cardiovascular system and its functions in health and disease in humans and animals.

09.02 02 Dental Materials

The study of the substances used in the care and repair of teeth, gums, and other structures in the oral cavity.

09.02 03 Endodontics

The study of the aetiology, diagnosis, prevention, and treatment of conditions that affect the dental pulp and other periodontal tissues, including pulp canal therapy and root canal therapy.

09.02 04 Occlusion

The study of the principles and techniques of fitting together the teeth of the lower jaw with the corresponding teeth of the upper jaw.

09.02 05 Operative Dentistry

The study of the techniques and principles of cavity preparation, manipulation of restorative materials, instrumentation, and filling or fitting.

09.02 06 Oral Medicine

The study of the techniques and procedures for examining patients for the signs or symptoms of oral disease and the oral manifestation of systemic disease, and the non-surgical treatment of oral disease.

III-09-07

09.02 07 Orthodontics

The study of the principles and techniques involved in the prevention and correction of dental and oral anomalies.

09.02 08 Periodontics

The study of the supporting structures of the teeth with regard to prevention, diagnosis and treatment of diseases affecting these tissues.

09.02 09 Programmatic Pain Control

The study of the principles and techniques for administering to patients substances which reduce pain or raise pain threshold limits in the course of dental work.

09.02 10 Prosthodontics

The study of the principles and techniques of constructing artificial devices, and the restoration and maintenance of oral function by the replacement of missing teeth and other oral structures with such artificial devices.

09.02 11 Chiropody

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the feet.

09.02 12 Dermatology

The study of the skin, its structures, functions, diseases, and the treatment of skin diseases in humans and animals.

09.02 13 Endocrinology

The study of the endocrine glands and their secretions in health and disease, including the treatment of such diseases and care of the patient.

09.02 14 Gastro-enterology

The study of the structures, functions, disorders, and care and treatment of the gastro-intestinal tract in humans and animals.

09.02 15 Internal Medicine

The study of the principles and procedures involved in the diagnosis and non-surgical treatment of diseases of the body in humans and animals.

09.02 16 Nephrology

The study of the structure, function, diseases, and care and treatment of the kidneys.

09.02 17 Neurology

The study of the structure, function, disorders and diseases, and care and treatment of the nervous system in humans and animals.

09.02 18 Ophthalmology

The study of the anatomy, physiology, diseases and disorders, and care and treatment of the eye in humans and animals.

09.02 19 Optometry

The study of the principles and techniques for testing visual function, and prescribing corrective means for visual deficiencies.

09.02 20 Orthopaedics

The study of the principles and techniques of correcting or curing deformities and diseases of the spine, bones, joints, muscles, or other parts of the locomotor system in humans and animals.

09.02 21 Otorhinolaryngology

The study of the anatomy, physiology, disorders, and diseases, and care and treatment of the ear, the nose, and the throat in humans and animals.

09.02 22 Proctology

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the rectum and anus in humans and animals.

III-09-09

09.02 23 Psychiatry

The study of the pathogenesis, prevention and management of disorders of the mind.

09.02 24 Pulmonology

The study of the structure, function, diseases, and care and treatment of the lungs in humans and animals.

09.02 25 Urology

The study of the anatomy, physiology, disorders and diseases, and care and treatment of the genito-urinary tract in humans and animals.

09.02 31 Allergy

The study in humans and animals of the diagnosis, care, and treatment of harmful conditions resulting from hypersensitivity of the body to specific substances.

09.02 32 Oncology

The study of the diagnosis, development, characteristics, and treatment of tumours in humans and animals.

09.02 33 Rheumatology

The study of the diagnosis, development, characteristics, and treatment of diseases which involve painful inflammation and stiffness of the muscles and joints.

09.02 34 Geriatrics

The study of the principles and techniques associated with the medical and hygienic care of old persons and old animals, and the diagnosis and treatment of diseases associated with aging.

09.02 41 Geriodontics

The study of the principles and techniques of diagnosing and treating the dental conditions of aging and aged persons.

09.02 42 Gerontology

The study of the process of aging, and of the care and treatment of the special problems of aged people.

09.02 43 Gynaecology

The study of the nature and treatment of diseases of women and female animals affecting the reproductive system.

09.02 44 Obstetrics

The study of the process of childbirth, and of the care and treatment of women in childbirth and during the period before and after delivery as well as the study of birth in animals and the care of the mother during the peri-natal period.

09.02 45 Paediatrics

The study of the principles and techniques associated with the medical and hygienic care of children and of the diagnosis and treatment of children's diseases.

09.02 46 Paedodontics and Paediatric Dentistry

The study of the principles and techniques of diagnosing and treating the dental and mouth conditions of young children.

09.02 51 Acupuncture

The study in humans and animals of the principles and techniques of the Chinese medical practice that attempts to cure illness or reduce pain by puncturing specified areas of the skin with needles.

09.02 52 Anaesthesiology

The study of the principles and practices in humans and animals of administering substances that produce sleep, or general or local insensibility to pain and other sensations.

09.02 53 Health Care Assisting

The study of the principles and techniques of assisting health care professionals in carrying out their tasks and responsibilities in a variety of health care settings.

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III-09-11

09.02 53 01 Dental Assisting

Nursing

22 30.00

The study of the techniques of providing assistance to a supervising dentist, including chairside procedures during dental operator, reception and clerical work, and selected laboratory work.

09.02 53 02 Medical Assisting

Nursing

22 30.00

The study of the techniques of providing assistance to medical doctors in clinics, offices, and other health care settings.

09.02 53 03 Nursing Assisting

The study of techniques for performing designated tasks involved in the personal care of individuals receiving nursing service, under the supervision of a nurse.

09.02 53 04 Veterinary Assisting

The study of techniques for providing assistance to a supervising veterinary clinician in administering appropriate medical care and treatment to animals and of veterinary nursing.

09.02 54 Chiropractic

The study of the principles and techniques for relieving disorders believed to be due to abnormal function of the nervous system by manipulation and treatment of the structures of the body, especially those of the spinal column.

09.02 54 01 Chiropractic Clinical Applications

The study of the principles and techniques involved in diagnostic evaluation, case management, and adjustive applications in the practice of chiropractic.

09.02 54 02 Chiropractic Roentgenology

The study of the principles and techniques of using X-rays in the practice of chiropractic.

III-09-12

09.02 55 Nursing

The study of techniques and procedures for providing care for sick, disabled, infirm, or other individuals, including the administering of medications and treatments, assisting a medical practitioner during treatments and examinations, and planning education for health maintenance.

09.02 55 01 Primary Nursing

The study of the principles and techniques of providing nursing care for people who seek health information, who have a chronic or progressive illness requiring supportive management and periodic evaluations, who have a common and usually simple episodic illness, and who require immediate emergency care and referral for care of serious disease and trauma.

09.02 55 02 Secondary Nursing

The study of the principles and techniques of providing nursing care for people who have an illness or disability evidencing rapid onset, severe symptoms, and a short course.

09.02 55 03 Tertiary Nursing

The study of the principles and techniques of providing nursing care for people who have long-term reversible illnesses requiring intermittent manipulations of therapeutic regimens, or who have chronic irreversible illnesses requiring on-going comprehensive management.

09.02 56 Osteopathy

The study of the system of therapy utilising accepted physical, medical and surgical methods, of diagnosis and therapy, and emphasising the importance of normal body mechanics and manipulation methods of detecting and correcting faulty body structure.

09.02 57 Physical Medicine

The study in humans and animals of the principles and techniques of medicine which deal with the diagnosis, treatment, and prevention of musculo-skeletal disease with the aid of physical agents, such as light, heat, cold, water, and electricity, or with mechanical apparatus.

III-09-13

III-09-13

09.02 58 Preventive Health Care

The study of the principles and techniques that are used on a regular and planned basis to prevent the occurrence of disease or injury, and to maintain health through established methods.

09.02 58 01 Preventive Dentistry

The study of the principles and techniques or substances which are used to avoid dental disease, and which are a part of an on-going programme of prevention and care.

09.02 58 02 Preventive Medicine

The study of the principles and techniques of medicine which deal with the promotion of physical and mental health, the prevention of disease, and the prolongation of life, as opposed to the mere treatment of existing disease.

09.02 58 03 Veterinary Preventive Medicine

The study of the methods and techniques for maintaining animal health through diet, inoculations, care, management, and other preventive practices.

09.02 59 Radiology

The study of the principles and techniques of using Roentgen rays for diagnostic purposes in humans and animals.

09.02 60 Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities by manual operation and manipulation or by using instruments and appliances in humans and animals.

09.02 60 01 Abdominal Surgery

The study in humans and animals of the principles and techniques of treating diseases, injuries, or deformities of the abdomen and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 02 Broncho-oesophagology

The study of the principles and techniques of treating diseases, injuries, or deformities of the trachea and oesophagus and adjacent areas by manual manipulation or by using instruments and appliances in humans and animals.

III-09-14

III-09-14

09.02 60 03 Burns Therapy Preventive Health Care 82 10.00

The study of the principles and techniques of treating injuries caused by heat, abnormal cold, chemicals, poison gas, electricity, or lightning by manual manipulation or by using instruments and appliances in humans and animals.

09.02 60 04 Cardiothoracic Surgery Preventive Health Care 82 10.00

The study of the principles and techniques of treating diseases, injuries, or deformities of the heart, lungs and adjacent areas by manual manipulation or by using instruments and appliances.

09.02 60 05 Colon and Rectal Surgery Preventive Health Care 82 10.00

The study of the principles and techniques of treating diseases, injuries, or deformities of the colon and rectum and adjacent areas by manual manipulation or by using instruments and appliances in humans and animals.

09.02 60 06 Hand Surgery Preventive Health Care 82 10.00

The study of the principles and techniques of treating diseases, injuries, or deformities of the hands by manual manipulation or by using instruments and appliances.

09.02 60 07 Head and Neck Surgery Preventive Health Care 82 10.00

The study of the principles and techniques of treating diseases, injuries, or deformities of the head, neck and adjacent areas by manual manipulation or by using instruments and appliances in humans and animals.

09.02 60 08 Neuro Surgery Preventive Health Care 82 10.00

The study of the principles and techniques of treating diseases, injuries, or deformities of the nervous system by manual manipulation or by using instruments and appliances.

09.02 60 09 Operating Theatre Technology Preventive Health Care 82 10.00

The study of the principles and techniques of providing general technical assistance to the surgical team while in the operating theatre.

09.02 60 10 Maxillo-facial and Oral Surgery Preventive Health Care 82 10.00

The study of the principles and techniques of treating diseases, injuries, or deformities of the jaws and associated structure.

III-09-15

09.02 60 11 Paediatric Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of children by manual manipulation or by using instruments and appliances.

09.02 60 12 Plastic Surgery

The study of the principles and techniques of repairing or replacing malformed, injured, or lost organs or tissues using surgical methods in humans and animals.

09.02 60 13 Thoracic Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the region of the chest by manual manipulation or by using instruments and appliances in humans and animals.

09.02 60 14 Urologic Surgery

The study of the principles and techniques of treating diseases, injuries, or deformities of the genito-urinary tract by manual manipulation or by using instruments and appliances in humans and animals.

09.02 71 Aerospace Medicine

The study of the integration and application of the fundamentals of medicine and the basic sciences to aerospace travel, including such aspects as biological problems peculiar to aerospace travel, and the adaptation of individuals to the conditions of aerospace travel.

09.02 72 Family Medicine

The study of the prevention, diagnosis, and treatment of diseases and injuries that commonly occur in the general population, and the home situation in particular.

09.02 73 Forensics

The study of the relationship and application of medical facts to legal problems.

09.02 73 01 Forensic Dentistry

The study of the relationship and application of dental facts to legal problems, as in using the teeth to identify the dead.

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09.02 73 02 Forensic Medicine

The study of the relationship and application of medical facts to legal problems of civil and criminal law, especially in court proceedings.

09.02 73 03 Forensic Veterinary Medicine

The study of the relationship and application of veterinary facts to legal problems of civil and criminal law, especially in court proceedings.

09.02 73 04 Forensic Psychiatry

The study of the relationship and application of psychiatric knowledge and techniques to legal problems of civil and criminal law, as in determining legal insanity.

09.02 74 Hospital Dentistry

The study of dental treatment procedures in the hospital emergency room and dental procedures in the operating theatre.

09.02 75 Industrial Medicine

The study of the principles and techniques of providing medical care for illnesses and injuries that are found in business and industrial settings.

09.02 76 Nuclear Medicine

The study of the principles and techniques of medicine that deal with the diagnosis and treatment of illnesses by means of nuclear radiation.

09.02 77 Tropical Medicine

The study of the principles and techniques of medicine that deal with the diagnosis and treatment of diseases and other conditions that occur in the tropics.

09.02 99 Other Clinical Health Sciences (Specify)

III-09-17

09.03 REHABILITATION AND THERAPY

The study of the principles and techniques used in assisting persons who are handicapped because of illness or injury to overcome or compensate for any loss of function, and to restore their physical or mental health to an optimum level.

09.03 01 Audiology and Speech Pathology

The study of the nature and treatment of hearing and speech diseases and disorders, including the principles and techniques of providing therapy that restores or partially restores normal functioning.

09.03 02 Dietetics and Nutrition

The study of the principles and techniques of using food and drink for therapeutic purposes to promote good health, and to eliminate disease.

09.03 03 Occupational Therapy

The study of the principles and techniques of providing therapy that offers mental diversion for the patient, and frequently serves to exercise an affected part of the body, and gives vocational training that would enable him to enter the work force.

09.03 04 Orthotics

The study of the principles and techniques of writing specifications for, making, and fitting braces and appliances for body deformities and disorders, following the prescription of a qualified medical practitioner.

09.03 05 Physiotherapy

The study of the principles and techniques of treating disease, bodily weakness, or physical defects by physical remedies, including massage and gymnastics.

09.03 06 Prosthetics

The study of the principles and techniques of writing specifications for, making, and fitting artificial limbs, following the prescription of a qualified practitioner.

09.03 07 Radiotherapy

The study of the principles and techniques of using radiation-producing devices to administer therapeutic treatments.

09.03 08 Recreation Therapy

The study of the principles and techniques of treating illness, disease, or injury through participation in recreation activities.

09.03 09 Respiratory Therapy

The study of the principles and techniques of treating illness, disease, or injury through the use of breathing methods and apparatus, including the administration of oxygen and other sustaining gases.

09.03 10 Special Therapy

The study of the principles and techniques of using specially designed therapeutic procedures to treat a specific illness, disease, or injury.

09.03 99 Other Rehabilitation and Therapy (Specify)

09.04 PHARMACEUTICAL SCIENCE

The study of the principles and procedures of formulating, procuring, preparing, compounding, recommending, administering, and dispensing drugs, medicines and devices used in the diagnosis, treatment, or prevention of disease.

09.04 01 Biopharmaceutics

The study of the factors that influence the extent and rate of absorption of drugs from various dosage forms.

09.04 02 Drug Distribution Systems

The study of the systems for the distribution of drug products and devices from the manufacturer via the pharmacist to the ultimate consumer; including drug distribution, economics of the pharmaceutical industry, and record and control systems.

III-09-19

09.04 03 Drug and Drug Abuse Information

The study of the principles and procedures associated with the collection, storage, evaluation, and communication of drug information in response to patient health care problems.

09.04 04 Forensic Pharmacy

The study of statutes, regulations, rules, and case law that are applicable to the procuring, manufacturing, administering, prescribing, storing, and dispensing of drugs, including the Pharmacy Act, Act on the Control of Medicine, pharmaceutical jurisprudence, and legal aspects of pharmacy management.

09.04 05 Industrial Pharmacy

The study of the application of pharmaceutical, physicochemical, and engineering principles and technologies to the development of various pharmaceutical dosage forms on an industrial scale, including cosmetic technology, sterile products, product development, and manufacturing pharmacy.

09.04 06 Radio Pharmacy

The study of the preparation, dispensing, and advising of drugs that are used in diagnosis and treatment of disease, some of whose constituent atoms are radioactive, including clinical radiopharmacy and radiomedications.

09.04 07 Pharmaceutical Chemistry

The study of the chemical and physical properties of organic and inorganic compounds which have medical or pharmaceutical uses, including the synthesis of organic drugs and inorganic pharmaceutical chemistry.

09.04 07 01 Organic Pharmaceutical Chemistry

The study of the organic compounds which have medical or pharmaceutical uses, the relationships between chemical structure and pharmacological activity, and the principles of drug design; including the chemistry of synthetic drugs, drug design, and organic medicinal chemistry.

09.04 07 02 Analytical Pharmaceutical Chemistry

The study of the principles and procedures of applying analytical chemistry to the analysis of pharmaceutical dosage form systems, which includes drugs and dosage form excipients, packaging materials, and the qualitative and quantitative determination of drugs or drug metabolites in biological fluids and tissues; including quantitative pharmaceutical chemistry, pharmaceutical quality control, and bio-assay.

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09.04 08 Pharmaceutics

The study of the principles and procedures of applying mathematics, statistics, physics, chemistry, microbiology, biopharmaceutics, physical chemistry, and physiology to the formulation, manufacture, compounding, storage, control, and dispensing of drug products and devices; including dosage forms, pharmacy principles, dispensing, pharmacy calculations, and pharmaceutical technology.

09.04 09 Pharmacognosy

The study of the drugs and chemicals which have their origin in or are derived from plant and animal sources, including the history, collection, identification, preparation, composition, and use of these drugs and chemicals.

09.04 10 Pharmacokinetics

The study of the kinetics of absorption, distribution, metabolism, and excretion of drugs and chemicals.

09.04 11 Pharmacy Practices and Management

The study of the knowledge, techniques, and procedures needed for the rendering of pharmaceutical services; including pharmaceutical marketing, professional accounting, pharmacy practice, financial management of pharmacy practice, pharmacy management, clinical pharmacy, health care accessories and appliances, and non-prescription drugs.

09.04 11 01 Community Pharmacy

The study of the knowledge, techniques, and procedures needed for the rendering of pharmaceutical services in the community, including community pharmacy administration, ethics, and community practice.

09.04 11 02 Institutional Pharmacy

The study of the knowledge, techniques, and procedures needed for the rendering of pharmaceutical services in institutions, such as hospitals, extended care facilities, Department of Health of the Central Government, community health centres, including hospital pharmacy administration, hospitalised patient care, sterile produce formulation, and organisation of pharmacy services in health care facilities.

09.04 12 Physical Pharmacy

The study of the application of physicochemical principles to pharmaceutical systems, including kinetics of drug degradation and stabilisation, pharmaceutical colloids, dispensed systems, and equilibrium phenomena.

09.04 99 Other Pharmaceutical Science (Specify)09.05 EMERGENCY SERVICES

The study of the methods, procedures, and techniques of providing health care services for persons who need emergency treatment and are not housed in a health care facility.

09.05 01 Cardiopulmonary Resuscitation

The study of the principles and techniques for reviving the actions of the heart and lungs from a state of apparent death or unconsciousness, using mechanical devices or hands-on techniques.

09.05 02 Emergency Extrication

The study of the techniques and procedures required to respond to medical emergency calls, to evaluate the nature of the emergencies, to take appropriate prompt action to reduce the medical hazards to the receiving station, and to assist the emergency room staff of general hospitals.

09.05 03 Emergency Communications

The study of the development and use of electrical and electronic devices, sensors, and other equipment used in communicating between the hospital or care centre and the emergency unit in the field.

09.05 04 First Aid

The study of the skills necessary, in times of emergency, to prevent the death, or further injury, of a person until the services of a physician or other regular medical or surgical care can be administered.

09.05 99 Other Emergency Services (Specify)

09.06 HOSPITAL AND HEALTH CARE ADMINISTRATION 09.06 15

The study of the principles and procedures of planning, organising, and controlling a hospital or health care facility.

09.06 01 Hospital Organisation and Management 09.06 09

The study of the principles and procedures of applying management methods and techniques to hospitals, including problem solving, executive role, personnel management, financial management, patient care, and support services.

09.06 01 01 Long-term Care Facilities 09.06 09

The study of the principles and procedures of planning, organising, and directing a nursing home or other long-term care facility.

09.06 01 02 Patient Care Management 09.06 09

The study of the principles of applying the concepts of management, organisational behaviour, personnel management, legal aspects, budgeting, policy development, and continuing education as they relate to patient care in a hospital or health care facility.

09.06 02 Health Care Services 09.06 09

The study of the principles and practices of providing health care services through alternative systems, including their characteristics, costs, utilisation, and efficacy.

09.06 03 Health Organisation, Standards, and Evaluation 09.06 09

The study of the characteristics of health organisations, the current standards in the health care field, and the relationship of standards to health care evaluation.

09.06 99 Other Hospital and Health Care Administration 09.06 09

(Specify)

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- 09.07 PUBLIC HEALTH Occupational Medicine 80 70.00
 The study of the formulation and delivery of public preventive and curative health services.
- 09.07 01 Biometry Physiological Systems 80 70.00
 The study of the application of biometric methods for analysing community health delivery systems.
- 09.07 02 Community Medicine Public Health Administration 80 70.00
 The study of the techniques and procedures for providing health care and services to the community.
- 09.07 03 Environmental Health Administration Environmental Health Sciences 80 70.00
 The study of the methods and procedures for eliminating or controlling air and water pollution, waste and sewage, noise, vibration, fungi, and other environmental hazards.
- 09.07 04 Human Ecology Human Ecology 80 70.00
 The study of the relationship between a person's biologic functioning and the environment.
- 09.07 05 Industrial Health Administration Veterinary Medicine 80 70.00
 The study of the theories and techniques for meeting the health and environmental problems which occur in the industrial setting.
- 09.07 06 Maternal and Child Health Administration Maternal and Child Health Administration 80 70.00
 The study of the methods and procedures for providing health care for mothers and children.
- 09.07 07 Mental Health Administration Mental Health Administration 80 70.00
 The study of the methods and procedures for providing community mental health programmes and for providing care for mentally ill persons.

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09.07 08 Occupational Medicine

The study of the techniques and procedures for providing care for persons who sustain injury on the job.

09.07 09 Physiological Hygiene

The study of nutrition, tests and measurements of physical fitness, gerontology, adaptation in health and disease, body composition, circulatory dynamics, and related topics.

09.07 10 Public Health Administration

The study of the methods of administrating, planning, and co-ordinating the health service needs of communities.

09.07 99 Other Public Health (Specify)

09.08 VETERINARY HEALTH SCIENCES

The study of the nature, prevention, and treatment of animal diseases; the medical and surgical treatment of animals, and the improvement of animal productivity and utility.

09.08 01 Veterinary Medicine

The study of the practices of medicine as applied to animals.

09.08 01 01 Aquatic Medicine

The study of the techniques and procedures for diagnosis, treatment, and prevention of medical problems of entirely or predominantly water-living animals.

09.08 01 02 Avian Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of birds.

09.08 01 03 Bovine Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of cattle.

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09.08 01 04 Canine Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of dogs.

09.08 01 05 Caprine Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of goats.

09.08 01 06 Equine Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of domestic equines.

09.08 01 07 Feline Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of cats.

09.08 01 08 Food Animal Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of animals used for food.

09.08 01 09 Laboratory Animal Science

The study of the diseases, genetics, breeding, nutrition and environment of laboratory animals as a source of defined experimental animals for biomedical research.

09.08 01 10 Ovine Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of sheep.

09.08 01 11 Zoo, Wildlife, and Exotic Animal Medicine

The study of the techniques and procedures for diagnosis, treatment and prevention of medical problems of zoo animals and wildlife, including ecological, ethological (and behavioural) aspects.

PS-00-III

09.08 02 Veterinary Public Health

The study of methods of prevention of spread of animal diseases or infections to man, especially by means of animal products used or consumed by man.

09.08 03 Theriogenology or Veterinary Genesiology

The study of the principles of animal reproduction, including artificial insemination, veterinary gynaecology, veterinary obstetrics and veterinary andrology.

09.08 99 Other Veterinary Medical Sciences (Specify)09.09 GENERAL PERSPECTIVES ON HEALTH CARE AND HEALTH SCIENCES

The study of the history and role of health care and health sciences in human culture and their relationship to other fields of knowledge, including concern for the means by which the affiliated professions are conducted.

09.09 01 Health Planning

The study of the processes involved in the development of alternative ways of achieving the health goals and expectations of society, including the identification of the consequences of each alternative for the purpose of guiding decision-makers in their deliberations.

09.09 02 History of Health Care and Health Sciences

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with health care and health sciences.

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09.09 03 Professional Practices in Health Care and Health Sciences

The study of establishing and maintaining health care services, including the design and construction of facilities for the rendering of such services, the determination of fees and charges, and the acknowledgement of standards of practice as identified and presented by colleagues.

09.09 03 01 Dental Professional Practices

The study of modes of practice and financing sources, surgery design and site selection, surgery management procedures, methods of building a practice, and methods of patient education.

09.09 03 02 Medical Professional Practices

The study of the principles and techniques of conducting a practice of medicine.

09.09 03 03 Veterinary Professional Practices

The study of the techniques and procedures followed in the exercise of the profession of veterinary medical care.

09.09 04 Ethics and Jurisprudence in Health Care and Health Sciences

The study of the ethical and legal expectations and requirements of practitioners in the fields of health care and health sciences, including professional and association codes and standards.

09.09 05 Clinical Practices in Health Care and Health Sciences

The study of the principles and procedures of observing, diagnosing, and treating of injuries or illnesses in clinical settings, including hospitals, surgeries, and health care centres.

09.09 05 01 Dental Clinical Practices

The study of the principles and procedures of observing, diagnosing, and treating dental illnesses or injuries in clinical setting.

09.09 05 02 Medical Clinical Practices

The study of the principles and practices in observing, diagnosing, and treating medical illnesses or injuries in a clinical setting.

09.09 05 03 Veterinary Clinical Practices

The study of the principles and practices of observing, diagnosing, and treating illnesses or injuries of animals in clinical setting.

09.09 99 Other General Perspectives of Health Care and Health Sciences (Specify)

09.99 OTHER HEALTH CARE AND HEALTH SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

10 HOME ECONOMICS

Subject matter concerned with the relationship between the physical, social, emotional, and intellectual environment in and of the home and family, and the development of individuals, including the study of the natural and social sciences and humanities in the development of attitudes, knowledge, and ability pertaining to clothing and textiles, consumer education, food and nutrition, home management, housing, human development and family studies, and institutional management.

10.01 CLOTHING AND TEXTILES

The study of ways of meeting psychological, sociological, economic and physiological needs for clothing and textiles, including techniques of production, distribution, marketing, consumption, refurbishing, and relevant legislation.

10.01 01 Clothing and Textile Maintenance

The study of the principles and procedures for care, cleaning, and repair of clothing and textiles in their use by individuals, families, and institutions.

10.01 02 Clothing and Textile Merchandising

The study of the characteristics of clothing and textile products, and the techniques of buying, advertising, displaying, and selling these goods for use by individuals, families, and institutions.

10.01 03 Clothing and Textile Selection

The study of the principles and procedures for choosing clothing and textile products for individuals, families, and institutions to meet aesthetic, economic, physical, psychological, and social needs.

10.01 04 Clothing Construction and Alterations

The study of the principles and techniques of individual and mass production of garments and their modification for use by individuals.

10.01 05 Clothing Design

The study of the techniques of creating wearing apparel or garments through use of structural and decorative lines to meet varying needs of individuals.

10.01 06 Clothing Economics

The study of the transformation of limited natural synthetic or man-made fibre resources into clothing and textile products, and their use by individuals, families, and institutions for the satisfaction of human needs.

10.01 07 Fashion Design

The study of the creative combination of line, form, and fabric in the production of garments and accessories for the high fashion field.

10.01 08 History of Clothing and Textiles

The study of the development, changes, and trends in the design, production, distribution, and use of clothing and textile products by individuals, families, and institutions in relation to other historical phenomena.

10.01 09 Socio-psychological Aspects of Clothing and Textiles

The study of socio-psychological and environmental factors that influence clothing behaviour, and the relation of clothing to development of self-concept, interpersonal communication, and other human interaction.

10.01 10 Textile Design

The study of the processes used to create the structure, coloration, and function of fabrics that will be used by individuals, families, and institutions.

10.01 11 Textile Production

The study of the relationship between materials and processes in the manufacture of textiles.

10.01 11 01 Textile Fibres

The study of the physical and chemical properties of textile fibers in relation to the performance of fabrics and other textile products manufactured from them.

10.01 11 02 Textile Finishes

The study of the chemical and mechanical finishes applied to textiles in relation to their performance in clothing and other textile products.

10.01 99 Other Clothing and Textiles (Specify)

10.02 CONSUMER EDUCATION

The study of attitudes, concepts, skills, and understandings of consumers which contribute to their satisfaction in their choice and utilisation of goods and services.

10.02 01 Consumer Choice

The study of the skills, concepts, processes, and attitudes involved in the selection of goods and services.

10.02 02 Consumer Economics

The study of the interrelationship of the economy and of decision-making by individuals in the provision and utilisation of goods and services.

10.02 03 Consumer Problems

The study of issues and problems facing the individual and collective consumers in society.

10.02 04 Consumer Resources

The study of the development and utilisation of human and material means through which desired life styles may be achieved by individuals, families, and communities.

10.02 05 Consumer Rights and Responsibilities

The study of legislation, the channels of information, and ameliorative actions and processes that consumers can follow to protect their rights and fulfil their responsibilities.

10.02 06 Personal and Family Finance

The study of income and distribution patterns that meet individual and family needs and wants, together with the means of achieving financial security.

10.02 07 Consumer Information

The study of the availability and types of consumer information and the uses consumers make of it.

10.02 99 Other Consumer Education (Specify)

10.03 FOOD AND NUTRITION

The study of the role of food and nutrition in personal and family living, and in commercial and institutional food services, with emphasis being placed on food handling techniques, purchase and storage of food, planning, preparing, and serving meals to meet the needs of individuals and families.

10.03 01 Community Nutrition

The study of the methods of assessing the nutritional status of individuals or population groups and of devising and implementing methods to change nutritional patterns and food selection if necessary.

10.03 02 Dietetics

The study of the science and art of human nutritional care, including the management of group feeding, and extending and imparting knowledge about foods which will provide nutrients throughout the life cycle that are sufficient for optimum health and disease control and eradication.

10.03 02 01 Clinical Dietetics

The study and application of principles of normal nutrition to clinical problems including descriptions of altered nutrient requirements in human disease.

10.03 02 02 Therapeutic Dietetics

The study of the modification of diet in disease or deficiency states including patient rehabilitation and education.

10.03 03 Experimental Foods

The study of the application of principles of food chemistry to the creation and testing of foods for individuals, families, and institutional use.

10.03 04 Food Habits and Patterns

The study of the relationship of the food practices of various groups of people as influenced by cultures, religion, knowledge, attitudes, education, and socio-economic level.

10.03 05 Food Production Technology

The study of the biological and chemical principles essential for food processing, as well as the equipment and procedures used in the production and distribution of food.

10.03 06 Food Regulations

The study and analysis of the role of local, Provincial, and Central Government laws and agencies in governing production and distribution of food, including sanitation and safety, nutrition labelling, and other food labelling regulations.

10.03 07 Food Related Equipment

The study of the functions, use, and care of equipment used in food production.

10.03 08 Food Selection

The study of the principles and methods of planning and purchasing food for individuals, families, and institutions.

10.03 09 Food Service

The study of the techniques of food presentation, table settings, etiquette, and table service for various types of individual, family, and institutional dining and entertainment.

10.03 10 Food Storage and Preservation

The study of the principles and techniques of storing, preserving, and preparing food in order to retain nutrients and quality for individual, family, and institutional use.

10.03 11 History of Food and Nutrition

The study of the discoveries, development, changes, issues, and trends in food, food supply, and nutrition as they relate to other historical phenomena and world issues.

10.03 12 Nutrition Education

The study of nutritional and educational concepts and their application through the development of techniques and materials to be used to educate the public to change the nutritional behaviour of individuals and families.

10.03 13 Nutrition

The study of the science of food, the nutrients and other substances of food, and the processes by which the organism ingests, digests, absorbs, transports, utilises, and excretes food substances in relationship to human needs.

10.03 14 Preparation of Food

The study of the principles and processes of food preparation that result in products with designated or specified characteristics.

10.03 99 Other Food and Nutrition (Specify)

10.04 HOME MANAGEMENT

The study of the concepts, skills, and processes through which decisions about the use of resources are directed toward goal achievement in home and family living. The subject matter involves an understanding of goal formulation and of management functions and processes through which the household and financial activities of individuals and families are accomplished.

10.04 01 Decision-Making

The study of factors and processes involved in arriving at decisions about managing a home.

10.04 02 Resource Management

The study of the relationship between human and material resources, such as time, energy, money, talent, and management of the home.

10.04 03 Management of Work

The study of the principles and procedures used to organise the work of the home to meet the needs of family members.

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10.04 04 Work Simplification

The study of the principles and procedures used for reducing time and energy costs of the work of the home.

10.04 05 Special Needs

The study of the application of managerial processes in special situations of individual and family need as for the handicapped, elderly, single head, and low income.

10.05 HOUSING

The study of psycho-socio-economic and aesthetic aspects of the selection of housing, home furnishings, household equipment, and interior design, and of the maintenance and repair of the home.

10.05 01 Home Furnishings

The study of the selection, use, and care of furniture, carpeting, accessories, and other articles in the home.

10.05 02 Home Maintenance and Repair

The study of the basic techniques for maintaining and repairing a home and its furnishings, including re-upholstery, slipcovering, and draperies.

10.05 03 Home Planning and Interior Design

The study of art principles, space planning, functional analysis, traffic patterns, and total home design in relation to individual life styles.

10.05 04 Household Equipment

The study of the purpose, selection, care, use, and maintenance of equipment used in the home.

10.05 05 Housing Choice

The study of the psychological, economic, social and aesthetic aspects, as well as laws and regulations, influencing choice of housing to satisfy human needs.

10.05 99 Other Housing (Specify)

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10.06 HUMAN DEVELOPMENT AND FAMILY STUDIES

The study of family interrelationships and processes of creating environments for the development of humans within a family setting.

10.06 01 Child Development

The study of processes and principles of the growth and development of children from conception through young adulthood, within the context of cultural, educational, and familial influences, with emphasis on social, emotional, physical, intellectual, and motor development; legislation; programmes and support services relating to children.

10.06 01 01 Care and Guidance of Children

The study of the behaviour of children and the principles, processes, and techniques of attending to and guiding children in family and group situations.

10.06 01 02 Parenting Education

The study of the development of attitudes, concepts, and skills necessary for effective parenthood.

10.06 01 03 Special Needs of Children

The study of the physical, intellectual, social, and emotional characteristics of exceptional children and the strategies for guiding the development of such children.

10.06 02 Family Development

The study of the family throughout its life cycle with emphasis on family structures, functions, interactions, and roles of family members.

10.06 02 01 Community Influences and Natural Resources

The study of cultural, social, and technological influences on the family in changing societies, including family programmes and support services that are available.

10.06 02 02 Family Crises

The study of factors affecting marital relationships, parent-child relationships, and the functioning of the family as a whole, including economic problems, separation and divorce, death, exceptional children, and illness.

10.06 03 Gerontology

The study of the characteristics, attitudes, and behaviour of older people in family settings, including physical, social, economic, and psychological needs and concerns; related legislation; and community resources.

10.06 04 Personal Development

The study of the self-development and actualisation of individuals through the family, including physiological and psychological aspects of human sexuality, personal hygiene, grooming, value development, interpersonal relationships, and patterns of adult living.

10.06 99 Other Human Development and Family Studies (Specify)

10.07 INSTITUTIONAL HOUSEKEEPING AND FOOD SERVICE MANAGEMENT

The study of the theory and practices involved in the operation of food service and housekeeping departments of institutions.

10.07 01 Housekeeping Management

The study of principles and procedures related to providing home health services and homemaker and housekeeping services in homes and institutions.

10.07 02 Food Service Management

The study of principles and procedures related to institutional and commercial food services that are found in hospitals, child care centres, homes for the elderly, schools, hotels, motels, and restaurants.

10.07 99 Other Institutional Housekeeping and Food Service Management (Specify)

10.99 OTHER HOME ECONOMICS (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

11 INDUSTRIAL ARTS, TRADES, AND TECHNOLOGY

Subject matter concerned with mechanical work, a business, a livelihood, or an occupation that requires special skills, especially of a manual or technical nature.

11.01 CONSTRUCTION

The study of the principles and techniques of erecting, installing, maintaining, or repairing buildings, highways, airports, missile sites, and earth and other structures, using such materials as metal, wood, stone, brick, glass, asphalt, concrete, or composition substances.

11.01 01 Carpentry

The study of the principles and techniques of layout, fabrication, assembly, installation, and repair of structural units, including the care and use of hand and power tools and the knowledge of equipment and materials, common systems of frame construction, and the principles of drafting, blueprint reading, and applied mathematics.

11.01 02 Concrete

The study of the techniques of preparing, mixing, form setting, testing, pouring, and finishing of substances composed of sand, gravel, and cement or similar substances.

11.01 03 Dry-wall Installation

The study of the principles and techniques of installing and bonding wallboard, plasterboard, or other interior structural surfaces.

11.01 04 Electrical

The study of the principles and techniques associated with the layout, assembly, installation, and testing of electrical fixtures, apparatus, and wiring used in electrical systems.

11.01 05 Environmental Systems

The study of the principles and techniques of installing, operating, and testing various types of heating, air cooling, and air quality control equipment, including humidifiers, filters, and fans.

11.01 06 Estimating

The study of the principles and techniques of calculating and estimating the probable costs of a proposed construction project.

11.01 07 Glazing

The study of the principles and techniques of preparing, fitting, and installing glass in structures and other openings of buildings such as windows, doors, and partitions, or in objects such as display cases and table tops.

11.01 08 Heavy Equipment

The study of the principles and techniques of operating and maintaining heavy-duty equipment such as bulldozers, cranes, graders, tractors, concrete mixers, crawler-mounted shovels, trailer-mounted compressors, and the petrol or diesel engines powering the equipment.

11.01 09 Ironmongering

The study of the principles and techniques of manufacturing, assembling, testing, and repairing of parts, mechanisms, machines, and structures in which iron is cast, formed, shaped, moulded, heat-treated, cut, twisted, bent, pressed, stamped, fused, marked, or otherwise worked upon.

11.01 10 Landscaping

The study of the principles and practices involved in locating, planting, and maintaining turf, plants, shrubs, trees, or other aesthetic plants used for the beautification of home grounds and other areas of human habitation and recreation, usually done in support of a landscape architect.

11.01 11 Masonry

The study of the principles and techniques of cutting, chipping, and positioning concrete blocks, brick, and glass blocks, using bonding materials and hand tools.

11.01 12 Millwork

The study of the principles and techniques of fabricating finished carpentry work in a mill, including such things as windows, doors, and moulding.

11.01 13 Painting and Decorating

The study of the principles and techniques of preparing and finishing exterior and interior surfaces by the application of protective or decorative coating materials such as lacquer, paint, wallpaper, or related materials.

11.01 14 Plastering and Lathing

The study of the principles and techniques of applying plaster, stucco, lathing, and similar materials to interior and exterior surfaces of structures.

11.01 15 Plumbing

The study of the principles and techniques involved in layout assembly, installing, altering, and repairing piping systems, including related fixtures and fittings in structures, by the use of pipe-cutting, bending, and threading tools; welding, soldering, and brazing equipment; and other hand and power tools and equipment.

11.01 16 Roofing

The study of the principles and techniques of covering roofs and exterior walls of structures with waterproofing or insulating materials, such as asphalt, aluminium, slate, wood, and related composition materials.

11.01 17 Sheetmetalwork

The study of the principles and techniques of pattern development, layout, operations, and related information concerned with forming and fabricating sheetmetal products.

11.01 18 Site Surveying

The study of the principles and techniques of determining legal location, form, or boundaries of a tract of land by measuring the lines and angles in accordance with the principles of geometry and trigonometry, usually done in support of a professional surveyor.

11.01 19 Welding

The study of the principles and techniques of cutting, fusing, and fabricating metal products with various types of welding equipment.

11.01 99 Other Construction (Specify)

11.02 MANUFACTURING

The study of the principles and techniques of planning and controlling the production of goods and articles in a factory, shop, or plant as opposed to on-site manufacture.

11.02 01 Ceramics

The study of the principles, techniques, processes, and materials used to prepare and convert clay into products, including moulding, throwing, jiggling, baking, firing, trimming, and glazing.

11.02 02 Foundry

The study of the principles, techniques, processes, and materials used to pattern, mould, core, cast, and found molten metal, and to shake out or remove moulds and finish metal products.

11.02 03 Glass Products

The study of the principles, techniques, processes, and materials used in the production of glass or refractory products, including casting, tempering, blowing, spinning, coating, colouring, cutting, rolling, and polishing.

11.02 04 Health Devices

The study of the principles, techniques, processes, and materials used in the custom fabrication of devices to aid the health and well being of individuals, including dental prosthesis, artificial limbs, and braces and other devices used by persons with physical handicaps.

11.02 05 Leather and Hide Processing

The study of the principles, techniques, processes, and materials used to convert animal hide into leather products, including curing, tanning, dyeing, cutting, sewing, and glueing.

11.02 06 Metalworking

The study of the principles, techniques, processes, and materials used to shape metal products by cutting, forming, finishing, assembling, and heat treating and including rolling, extension milling, sawing, turning, drilling, boring, grinding, pressing, plating, drawing, bending, and hardening.

11.02 07 Needle Trades

The study of the principles, techniques, processes, and materials used in the hand and machine production of garments, including pattern making, cutting, sewing, and finishing.

11.02 08 Paper and Fabrication

The study of the principles, techniques, processes, and materials used to convert wood or cloth into pulp, paper, and paper products in roll or sheet form, including calendering, texturing, coating, embossing, corrugating, and laminating.

11.02 09 Plastics

The study of the principles, techniques, processes, and materials used to generate raw plastic in liquid, granular, or sheet form and to convert those forms into products, including blowing, casting, extension, coating, rolling, bending, and cutting.

11.02 10 Product Development

The study of the principles, techniques, processes, and materials used in the generation of new products, including the determination of product feasibility, resource requirements, machine engineering and design, consumer demand, and finishing processes.

11.02 11 Production Systems

The study of the principles and alternative techniques and processes of producing goods and articles, including the evaluation of time and space requirements, costs, and quality and quantity of output.

11.02 12 Textile Production

The study of the principles, techniques, processes, and materials used in the fabrication of textiles from raw fibre, including yarn making, dyeing, weaving, knitting, pre-shrinking, and teasing.

11.02 13 Tool and Die

The study of the principles, techniques, processes, and materials used to fabricate devices which hold, position, guide, press, blank, shear, pattern, or bend product parts during their production.

11.02 14 Wood Products

The study of the principles, techniques, processes, and materials used to fabricate products from wood forms other than pulp, including operations such as sawing, planing, sanding, finishing, laminating, bonding, and compressing.

11.02 99 Other Manufacturing (Specify)

11.03 POWER SYSTEMS

The study of the principles and practices of fabricating, adjusting, operating, maintaining, and repairing mechanisms or systems which are used to generate energy, transform energy forms, or convert energy into work.

11.03 01 Atomic Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from atom fission or fusion, including such components as piles and reactors.

11.03 02 Chemical Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power primarily from the chemical reactions of elements, including such chemical components as batteries and internal combustion systems.

11.03 03 Electrical Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from the movement or flow of electrical current, including such electrical components as generators, motors, vacuum tubes, capacitors, transformers, switches, fuses, transistors, and electrical circuitry.

11.03 04 Mechanical Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment for systems designed to convert, transmit, or generate power from linear and circular motion or position, including such mechanical components as turbines, shafts, levers, wheels, belts, gears, hydraulics, pneumatics, chains, couplings, and clutches.

11.03 05 Radiant Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from wave forms, including light, sound, and rays.

11.03 06 Thermic Power

The study of the principles, processes, materials, and techniques used in the fabrication, operation, and rebuilding of equipment and systems designed to convert, transmit, or generate power from molecular movement or excitement which creates heat, including steam, jets, and engines.

11.03 07 Power Mechanics

The study of the principles, techniques, processes, and materials of energy conversion and power generation through control and transmission, using conventional products and systems.

11.03 08 Power and Energy Sources

The study of the principles and techniques of exploring the sources of energy that can be put to work in useful power systems.

11.03 99 Other Power Systems (Specify)

11.04 PRODUCT SERVICE

The study of the principles and techniques of repairing, preserving, and maintaining products, equipment, and appliances for continued use in efficient operating condition.

11.04 01 Aircraft Maintenance

The study of the principles and techniques of inspection, repair, servicing, and overhauling of all aeroplane parts.

11.04 01 01 Air Frame

The study of the principles and techniques of maintaining and repairing the framework and external covering of an aircraft, including fuel and oil tanks, control devices, and hydraulic units.

11.04 01 02 Aircraft Power Plant

The study of the principles and techniques of maintaining and repairing aircraft power plants, including propellers, instruments, and engines.

11.04 02 Appliance Repair

The study of the principles and techniques of applying the theory of electrical circuitry, simple gearing, linkages, and lubrication to the operation, maintenance, and repair of relays, time switches, pumps, and agitators used in appliances, such as washers, driers, vacuum cleaners, toasters, water heaters, and stoves.

11.04 03 Building Maintenance

The study of the principles and techniques of maintaining the interior and exterior surfaces of residential, commercial, industrial, and recreational buildings, including the use of preventive measures.

11.04 04 Business Machine Maintenance and Repair

The study of the principles and techniques of maintaining and repairing a variety of office machines, such as typewriters, dictation machines, calculators, data processing equipment used for recording and processing data, and duplicating and mailing machines.

11.04 05 Communications Equipment Maintenance and Repair

The study of the principles and techniques of maintaining and repairing communications equipment, including transmitters, antennae, receivers, connectors, displays, and processors.

11.04 06 Custodial Services

The study of the principles and techniques used in the care and cleaning of all types of buildings, including their fixtures and furnishings.

11.04 07 Fabric Maintenance and Repair

The study of the principles and techniques of all phases of fabric maintenance, including plant management and processing for drycleaning, laundering, sterilisation, and other such services.

11.04 08 Heating and Cooling Systems Maintenance and Repair

The study of the principles and techniques of maintaining and repairing heating systems, air conditioning systems, and combustion heating and cooling systems.

11.04 09 Instrument Maintenance and Repair

The study of the principles and techniques of maintaining and repairing meters, instruments, watches and clocks, and other physical measuring devices.

11.04 10 Marine Repair

The study of the principles and techniques of maintaining and repairing the hull, deck and deck structures, sails, steerage, and related components of watercraft.

11.04 11 Millwrighting

The study of the principles and techniques of maintaining and repairing electrical equipment, plumbing, carpentry, general machining, and other various maintenance tasks within a mill or industrial plant.

11.04 12 Radio-television Maintenance and Repair

The study of the principles and techniques of maintaining and repairing radios, televisions, two-way mobile communication devices, stereo-phonographs, and tape recording and playback systems.

11.04 13 Small Engine Repair

The study of the principles and techniques of maintaining and repairing small engines, including those for motorboats, lawn mowers, compressors, and generators.

11.04 14 Vehicle Maintenance and Repair

The study of the principles and techniques of maintaining and repairing vehicles used to transport materials, people, and products.

11.04 14 01 Chassis Repair

The study of the principles and techniques of maintaining and repairing the vehicle chassis, including damaged bodies and fenders, painting, and replacement of body components such as trim.

11.04 14 02 Power and Drive Repair

The study of the principles and techniques of maintaining and repairing diesel and petrol engines, transmissions, and differential gearing for buses, trucks, ships, railway trains, construction machinery, and similar equipment.

11.04 14 03 Vehicle Specialties Repair

The study of the principles and techniques of maintaining and repairing to include tune-ups, brakes, emission control, and other components.

11.04 99 Other Product Service (Specify)

11.05 GRAPHIC ARTS

The study of the principles and techniques of image origination, preparation, and graphic reproduction, and providing multiple copies, cards, and covers for private or business and industrial purposes.

11.05 01 Binding

The study of the principles and techniques of gathering pages, forms, and related materials and assembling them into books or pamphlets, including techniques concerned with binding and repairing books and documents, and in collating, cutting, and fastening.

11.05 02 Copy Preparation

The study of the principles and techniques of preparing photo or copy ready sheets, plates, or masters by hand or mechanical processes.

11.05 02 01 Cold Type

The study of the principles and techniques of preparing copy by either mechanical or electronic means.

11.05 02 02 Hot Type

The study of the principles and techniques of preparing proofs, either by hand or mechanical processes, for the purpose of reproducing impressions on plates or bed presses.

11.05 03 Drawing

The study of the principles and techniques of depicting ideas, messages, or data, through the use of pictures or lines, using pencil, pen, crayon, or other substances.

11.05 03 01 Drafting

The study of the principles, techniques, standards, and conventions for conveying ideas or illustrations graphically through drawings, charts, sketches, maps, and graphs.

11.05 03 02 Illustration

The study of the principles and techniques of conveying information or ideas by two-dimensional means, using a variety of materials.

11.05 03 03 Blueprinting

The study of the principles and techniques of photographic printing which produces a white line on a blue background, and is used chiefly in copying architectural and mechanical drawings.

11.05 04 Photography

The study of the principles, techniques, tools, materials, and processes used in photography with emphasis on industrial and commercial uses, including the use of movie and still cameras, developing negatives, and making contact prints, enlargements, and mountings.

11.05 05 Printing

The study of the principles and techniques involved in a graphic reproduction from an original plate or master onto a material surface such as paper or cloth.

11.05 05 01 Gravure (Intaglio)

The study of the principles and techniques of printing from an etched or sunken surface.

11.05 05 02 Letterpress

The study of the principles and techniques involved in the graphic reproduction of impressions on paper or other stock from a metal plate or hot type face.

11.05 05 03 Offset Lithography

The study of the principles and techniques involved in the graphic reproduction of images onto paper or other substances from an original, plate, or master, using an offset duplicator or press.

11.05 05 04 Stencil

The study of the principles and techniques of applying a pattern, design, or words to a surface by rubbing, brushing, or pressing a colouring substance through perforations cut into a thin sheet of cardboard, metal, or other material.

11.05 05 05 Xerography

The study of principles and techniques of preparing graphic reproductions of original materials by using photochemical processes.

11.05 99 Other Graphic Arts (Specify)

11.06 TRANSPORTATION

The study of the principles and techniques of steering or otherwise controlling a vehicle for commercial or public use in the air, on land, or in water, for the purpose of moving people or things from one place to another.

11.06 01 Flight Operations

The study of the principles and procedures of in-flight operation of commercial planes, including piloting and navigating.

11.06 02 Ground Operations

The study of the principles and procedures of ground support of commercial planes, including aircraft pre-flight service and flight control but excluding passenger service.

11.06 03 Heavy Equipment Operations

The study of the principles and techniques of safely operating off-the-road heavy vehicles, including bulldozers, graders, and scrapers.

11.06 04 Maritime Service

The study of the principles and techniques of seamanship, including the maintenance and operation of large and small commercial or public vessels.

11.06 05 Recreational Vehicle Operations

The study of the principles and techniques of operating recreational vehicles such as sailing boats and other pleasure craft.

11.06 99 Other Transportation (Specify)

11.07 PERSONAL SERVICE

The study of the principles and techniques that relate to the care, treatment, and disposition of the human body, with emphasis on the physical appearance of individuals.

11.07 01 Barbering

The study of the principles and techniques of haircutting, shaving, shampooing, massaging, and styling hair and hairpieces.

11.07 02 Cosmetology

The study of the principles and techniques of caring for and beautifying hair, skin, and nails for personal enhancement, including permanent waving, hairshaping, and tinting.

11.07 03 Electrolysis

The study of the principles and techniques involved in the removal of superfluous hair from any area of the body by the use of electric current.

11.07 04 Aesthetic Skin Care

The study of the principles and procedures associated with specialised topical skin analysis and recommended treatment and care of skin.

11.07 05 Massage

The study of the principles and techniques of treating the body by rubbing or kneading to stimulate circulation, increase suppleness, promote healing, and induce relaxation.

11.07 06 Mortuary Science

The study of the principles and techniques of preparing a person for burial, including embalming, cremating, and other sanitary methods for interment in conformity with legal requirements, and the principles and procedures involved in conducting funerals.

11.07 99 Other Personal Service (Specify)

11.99

OTHER INDUSTRIAL ARTS, TRADES AND TECHNOLOGY
(SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

12 LANGUAGE, LINGUISTICS, AND LITERATURE

Subject matter concerned with the body of words and systems for their use that are common or indigenous to people of the same community or nation, the same geographical area, or the same cultural traditions; including such features as sounds, literature, syntax, phonology, morphology, semantics, sentences, prose and verse, as well as the development of skills and attitudes used in communicating and appreciating thoughts and feelings through oral and written language.

12.01 LINGUISTICS

The study of the descriptive, historical, and theoretical aspects of language, its nature, structure, varieties, and development, including especially the sound system (phonology), grammatical system (morphology, syntax), lexical system (vocabulary, semiology), and writing system.

12.01 01 Applied Linguistics

The study of the techniques of applying linguistic theory to human uses of language, including teaching.

12.01 01 01 Multilingualism and Language Contact

The study of language contact situations involving two or more languages.

12.01 01 02 Computational Linguistics

The study of the quantitative methods used in the analysis of language.

12.01 01 03 Contrastive Linguistics

The systematic study of the structure and meaning of two or more languages or dialects.

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12.01 01 04 Language Error Analysis

The study of the techniques used in systematically discovering and classifying errors in language.

12.01 01 05 Lexicography

The study of the principles and techniques used in the making of dictionaries.

12.01 01 06 Translating and the Theory of Translation

The study of phenomena associated with translating.

12.01 02 History of Linguistics

The study of the methodology of tracing and establishing the development of the phonology, morphology, syntax, and semantics of a language or language group.

12.01 03 Language Analysis

The study of the various means of analysing languages, including morphology, phonology, and syntax.

12.01 03 01 Lexicology

The study of the meanings of words and idiomatic combinations.

12.01 03 02 Morphology

The study of the meaningful word-forms, including affixes.

12.01 03 03 Phonetics

The study of speech sounds, their production and combination, and their representation by written symbols.

12.01 03 04 Phonology

The study of the sound system of a language which may be based on a phonemic or phonetic description.

12.01 03 05 Semantics

The study of meanings that are attributed to word-forms, words, immediate constituents, phrase-structures, and sentences.

12.01 03 06 Syntax

The study of groupings of words and word-forms into meaningful constituents and phrase structures.

12.01 04 Language Universals

The study of the elements of language which are common to all languages or to groups of languages.

12.01 05 Linguistic Theories

The study of the methodological principles of linguistic theory with reference to various schools of thought within the discipline.

12.01 05 01 Generative and Transformational Theories

The study of the grammatical theory which uses a set of rules, in a required order, capable of generating all possible grammatically acceptable sentences of a language. The rules are commonly expressed as formulas composed of symbols that represent linguistic units and operations; constructions may be derived from others by the process of structural change without change of meaning as by transformations.

12.01 05 02 Structural and Descriptive Theories

The study of grammar which objectively describes and analyses the structure of a language in terms of formally identifiable units in a hierarchy of increasingly complex combinations and the immediate and ultimate constituents of sentences; sometimes the study of any kind of grammar that is derived inductively from objective observation of a body of utterances in a language.

12.01 05 03 Traditional Grammatical Theories

The study of grammar based on classical Latin grammar, generally using terminology from Latin grammar.

12.01 06 Psycholinguistics

The study of the mental (psychological) processes involved in the production and reception (encoding and decoding) of language.

12.01 07 Sociolinguistics

The study of the use of language in different social environments.

12.01 07 01 Dialectology

The study of dialects, their underlying linguistic systems, and their use.

12.01 07 02 Language Planning

The study of the determination of the official language(s) of an area and the implementation of literary skills.

12.01 07 03 Language Variation

The study of variations within a language or a group of languages, such as jargon or deviations from the standard.

12.01 08 Historical Linguistics

The study of language change, linguistic reconstruction, dating and genetic relationships.

12.01 99 Other Linguistics (Specify)

12.02 LITERARY STUDIES

The study of the approaches used to analyse literature and of the tools used to facilitate practical criticism, emphasising bibliographical techniques, aesthetics, and the formal study of such theories as Formalism, Structuralism, and the "New Criticism".

12.02 01 Comparative Literature

The study of the comparison of various aspects of literature, based on selected dimensions such as genre, theme, literary period, and language source.

12.02 02 Literary Aesthetics and Appreciation

The study of the development of an appreciation of literature as an art form.

12.02 03 Literary Bibliography

The study of retrieval or creation of a systematic compilation of information relating to publication data of various media relating to literature.

12.02 04 Literary Criticism

The study of the methods and standards for judging the quality of literature.

12.02 05 Literary Theories

The study of the theoretical foundations of literature including historical, philosophical, political, and psychological perspectives.

12.02 99 Other Literary Studies (Specify)

12.03 THE STUDY AND USES OF THE AFRIKAANS LANGUAGE

The study of the skills and techniques essential to learning the Afrikaans language.

12.03 01 Dialects of the Afrikaans Language

The study of the written or spoken features of Afrikaans such as sounds, forms, constructions, and words, as they vary individually or in related groups with respect to their geographic or social distribution. The study may be synchronic (of a single point in time) or diachronic (historical).

12.03 02 History of the Afrikaans Language

The study of the ways in which the various dialects developed in the course of time into the Afrikaans language, including the influence of non-linguistic factors such as social and political change and the processes of general language change as they affected the Afrikaans language.

12.03 03 Afrikaans Language and Civilisation

The study of the history of selected events, individuals, groups, institutions, artefacts, ideas, and other phenomena associated with the development of peoples and countries in which the Afrikaans language occurs.

12.03 04 Afrikaans Language and Contemporary Culture

The study of the patterns of behaviour and beliefs commonly understood and shared by the people of those socio-economic milieux or geographical locations where Afrikaans is the dominant language.

12.03 05 Afrikaans Language Structure and Grammar

The study of the meaning-bearing units of the Afrikaans language such as words, phrases, and sentences, and their identification and relationships.

12.03 06 Listening Comprehension in Afrikaans

The study of the skills and techniques used to improve and measure what is heard and understood in learning the Afrikaans language.

12.03 07 Afrikaans Language Literature

The study of all writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, fiction, poetry, myths, and legends.

12.03 07 01 Literature in Afrikaans by Author

The study of the approach to Afrikaans literature through various authors.

12.03 07 02 Literature in Afrikaans by Genre

The study of the approach to Afrikaans literature through the various kinds or types of works such as drama, poetry, fiction, and essay.

12.03 07 03 Literature in Afrikaans by Period

The study of the approach to Afrikaans literature through the various time periods, such as 19th century or 20th century.

12.03 07 04 Literature in Afrikaans by Place

The study of the approach to Afrikaans literature according to geographical location, such as a country or city.

12.03 07 05 Literature in Afrikaans by Theme

The study of the approach to Afrikaans literature according to themes, such as freedom, courage, and sentimentality.

12.03 07 06 Literature in Afrikaans by Other Categories

The study of Afrikaans literature organised by other categories.

12.03 08 Reading in the Afrikaans Language

The study of the theory, methods and techniques in reading the Afrikaans language.

12.03 08 01 Beginning Reading in Afrikaans

The study of the activities involved in teaching pupils to read, following necessary readiness activities designed to develop understanding of the relationship between oral and written language, recognition of symbols (letters) and symbol-sound relationships, and appreciation of the reading process.

12.03 08 02 Developmental Reading in Afrikaans

The study of the methods and techniques designed to help pupils to develop sequentially all aspects of reading proficiency needed by a mature reader.

12.03 08 03 Reading Readiness in Afrikaans

The study of the methods and techniques of developing in children the mental, physical, and emotional maturity prerequisite to instruction in reading, emphasising direct and vicarious experiences involving oral language, such as listening, speech habits and patterns, sequential organisation of ideas, vocabulary development, and experience with books and stories.

12.03 08 04 Remedial Reading in Afrikaans

The study of the nature and use of diagnostic and remedial activities for individual pupils or groups of pupils, designed to correct and prevent further reading difficulties which interfere with the pupil's expected progress in developing reading skills, understandings, and appreciations.

12.03 09 Speaking the Afrikaans Language

The study of the theory, methods, and skills that are essential for the proper speaking of the Afrikaans language.

12.03 10 Writing the Afrikaans Language

The study of the theory, methods, and skills that are needed for writing the Afrikaans language.

12.03 10 01 Afrikaans Language Composition

The study of the principles and techniques of selecting, combining, arranging, and developing ideas, and expressing them in appropriate written forms such as narration, description, exposition, or persuasion.

12.03 10 02 Afrikaans Language Creative Writing

The study of the techniques of composition that involve some degree of spontaneity and exercise of the imagination on the part of the writer such as found in short stories, verse, drama, and personal forms of writing.

12.03 10 03 Afrikaans Language Rhetoric and Style

The study and analysis of the effective use of language, including an examination of the patterned use of language for its effect.

12.03 10 04 Afrikaans Language Technical Writing

The study of the theory, methods, and skills needed for writing scientific, research, or formal Afrikaans.

12.03 10 05 Afrikaans Language Writing Conventions and Usage

The study of the techniques of using basic writing skills, including handwriting, spelling, capitalisation, punctuation, and appropriate word choice.

12.03 99 Other Study and Uses of the Afrikaans Language
(Specify)

12.04 THE STUDY AND USES OF THE ENGLISH LANGUAGE

The study of the skills and techniques essential to learning the English language.

12.04 01 Dialects of the English Language

The study of the written or spoken features of English such as sounds, forms, constructions, and words, as they vary individually or in related groups with respect to their geographic or social distribution. The study may be synchronic (of a single point in time) or diachronic (historical).

12.04 02 History of the English Language

The study of the ways in which the various dialects developed in the course of time into the English language, including the influence of non-linguistic factors such as social and political change and the processes of general language change as they affected the English language.

12.04 03 English Language and Civilization

The study of the history of selected events, individuals, groups, institutions, artefacts, ideas, and other phenomena associated with the development of peoples and countries in which the English language predominates.

12.04 04 English Language and Contemporary Culture

The study of the patterns of behaviour and beliefs commonly understood and shared by the people of those socio-economic milieux or geographical locations where English is the dominant language.

12.04 05 English Language Structure and Grammar

The study of the meaning-bearing units of the English language such as words, phrases, and sentences, and their identification and relationships.

12.04 06 Listening Comprehension in English

The study of the skills and techniques used to improve and measure what is heard and understood in learning the English language.

12.04 07 English Language Literature

The study of all writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, fiction, poetry, myths, and legends.

12.04 07 01 Literature in English by Author

The study of the approach to English literature through various authors.

12.04 07 02 Literature in English by Genre

The study of the approach to English literature through the various kinds or types of works such as drama, poetry, fiction, and essay.

12.04 07 03 Literature in English by Period

The study of the approach to English literature through the various time periods, such as 19th century or 20th century.

12.04 07 04 Literature in English by Place

The study of the approach to English literature according to geographical location, such as a country or city.

12.04 07 05 Literature in English by Theme

The study of the approach to English literature according to themes, such as freedom, courage, and sentimentality.

12.04 07 06 Literature in English by Other Categories

The study of English literature organised by other categories.

12.04 08 Reading in the English Language

The study of the theory, methods and techniques in reading the English language.

12.04 08 01 Beginning Reading in English

The study of the activities involved in teaching pupils to read, following necessary readiness activities designed to develop understanding of the relationship between oral and written language, recognition of symbols (letters) and symbol-sound relationships, and appreciation of the reading process.

12.04 08 02 Developmental Reading in English

The study of the methods and techniques designed to help pupils to develop sequentially all aspects of reading proficiency needed by a mature reader.

12.04 08 03 Reading Readiness in English

The study of the methods and techniques of developing in children the mental, physical, and emotional maturity prerequisite to instruction in reading, emphasising direct and vicarious experiences involving oral language, such as listening, speech habits and patterns, sequential organisation of ideas, vocabulary development, and experience with books and stories.

12.04 08 04 Remedial Reading in English

The study of the nature and use of diagnostic and remedial activities for individual pupils or groups of pupils, designed to correct and prevent further reading difficulties which interfere with the pupil's expected progress in developing reading skills, understandings, and appreciations.

12.04 09 Speaking the English Language

The study of the theory, methods, and skills that are essential for the proper speaking of the English language.

12.04 10 Writing the English Language

The study of the theory, methods, and skills that are needed for writing the English language.

12.04 10 01 English Language Composition

The study of the principles and techniques of selecting, combining, arranging, and developing ideas, and expressing them in appropriate written forms such as narration, description, exposition, or persuasion.

12.04 10 02 English Language Creative Writing

The study of the techniques of composition that involve some degree of spontaneity and exercise of the imagination on the part of the writer such as found in short stories, verse, drama, and personal forms of writing.

12.04 10 03 English Language Rhetoric and Style

The study and analysis of the effective use of language, including an examination of the patterned use of language for its effect.

12.04 10 04 English Language Technical Writing

The study of the theory, methods, and skills needed for writing scientific, research, or formal English.

12.04 10 05 English Language Writing Conventions and Usage

The study of the techniques of using basic writing skills, including handwriting, spelling, capitalisation, punctuation, and appropriate word choice.

12.04 99 Other Study and Uses of the English Language
(Specify)

12.05 ARABIC

The study of the language, literature, and culture of Arabic-speaking peoples in the ancient and modern world.

12.05 41 Classical Arabic

The study of the language, literature, and culture of the ancient Arabic world.

12.05 42 Modern Standard Arabic

The study of the language, literature, and culture of Arabic-speaking peoples in the modern world.

12.06 ARTIFICIAL LANGUAGES

The study of and development of skills in reading, writing and conversing in artificial languages such as Esperanto and Volapuk.

12.07 CHINESE

The study of the language, literature, and culture of Chinese-speaking people, including Cantonese and Mandarin.

12.08 DUTCH

The study of the language, literature, and culture of Dutch-speaking people.

12.09 FINNISH

The study of the language, literature, and culture of the Finnish-speaking people.

12.10 FRENCH

The study of the language, literature, and culture of the French-speaking people.

12.11 GERMAN

The study of the language, literature, and culture of the German-speaking people.

12.12 GREEK

The study of the language, literature, and culture of Greek-speaking people, ancient and modern.

12.12 41 Classical Greek

The study of the language, literature, and culture of the ancient Greek world.

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12.12 42 Modern Greek

The study of the language, literature, and culture of Greek-speaking people in the modern world.

12.12 43 New Testament Greek

The study of the Greek language as used in the New Testament.

12.13 HEBREW

The study of the language, literature, and culture of Hebrew-speaking people, ancient and modern.

12.13 41 Classical Hebrew

The study of the language, literature, and culture of the ancient Hebrew world.

12.13 42 Modern Hebrew

The study of the language, literature, and culture of the Hebrew-speaking people of the modern world.

12.14 ITALIAN

The study of the language, literature, and culture of the Italian-speaking people.

12.15 JAPANESE

The study of the language, literature, and culture of the Japanese-speaking people.

12.16 LATIN

The study of the language, literature, and culture of the ancient Roman world, and the mediaeval European world.

12.16 41 Classical Latin

The study of the language, literature, and culture of the ancient Roman world.

12.16 42 Mediaeval Latin

The study of the language, literature, and culture of the mediaeval European world.

12.17 NATIVE AMERICAN

The study of the languages, literatures, and cultures of the Indians of North America.

12.18 NORWEGIAN

The study of the language, literature, and culture of the Norwegian-speaking people.

12.19 PERSIAN

The study of the language, literature, and culture of the Persian-speaking people.

12.20 PORTUGUESE

The study of the language, literature, and culture of the Portuguese-speaking people.

12.21 RUSSIAN

The study of the language, literature, and culture of the Russian-speaking people of the Soviet Union.

12.22 SANSKRIT

The study of the language and literature of Sanskrit.

12.23 SLAVIC LANGUAGES

The study of the languages, literatures, and cultures of Slavic peoples, including Polish, Czech, Serbo-Croatian, Slovenian, Bulgarian, and Ukrainian.

12.24 SOUTH-EAST ASIAN LANGUAGES

The study of the languages, literatures, and cultures of South-East Asian peoples, such as Laotian, Cambodian, Thai, and Vietnamese.

12.25 SPANISH

The study of the language, literature, and culture of the Spanish-speaking people.

12.26 SWEDISH

The study of the language, literature, and culture of the Swedish-speaking people.

12.27 YIDDISH

The study of the language, literature, and culture of the Yiddish-speaking people.

12.28 HERERO

The study of the language, literature, and culture of the Herero-speaking people.

12.29 KWANGALI

The study of the language, literature, and culture of the Kwangali-speaking people.

12.30 KWANYAMA

The study of the language, literature, and culture of the Kwanyama-speaking people.

12.31 LOZI

The study of the language, literature, and culture of the Lozi-speaking people.

12.32 MBUKUSHU

The study of the language, literature, and culture of the Mbukushu-speaking people.

12.33 NAMA

The study of the language, literature, and culture of the Nama-speaking people.

12.34 NDEBELE

The study of the language, literature, and culture of the Ndebele-speaking people.

12.35 NDONGA

The study of the language, literature, and culture of the Ndonga-speaking people.

12.36 SAN (BUSHMAN)

The study of the language, literature, and culture of the San-speaking people.

12.37 SHONA

The study of the language, literature, and culture of the Shona-speaking people.

12.38 SOTHO (NORTH)

The study of the language, literature, and culture of the North Sotho-speaking people.

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12.39 SOTHO (SOUTH)

The study of the language, literature, and culture of the South Sotho-speaking people.

12.40 SWATI (SWAZI)

The study of the language, literature, and culture of the Swati-speaking people.

12.41 TSONGA

The study of the language, literature, and culture of the Tsonga-speaking people.

12.42 TSWANA

The study of the language, literature, and culture of the Tswana-speaking people.

12.43 VENDA

The study of the language, literature, and culture of the Venda-speaking people.

12.44 XHOSA

The study of the language, literature, and culture of the Xhosa-speaking people.

12.45 ZULU

The study of the language, literature, and culture of the Zulu-speaking people.

12.49 OTHER AFRICAN LANGUAGES

The study of the language, literature, and culture of African peoples other than the above, such as Coptic, Berber, Iho, Yoruba, Amharic, Hausa, Egyptian, and Swahili.

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12.50 GUJERATI

The study of the language, literature, and culture of the Gujerati-speaking people.

12.51 HINDI

The study of the language, literature, and culture of the Hindi-speaking people.

12.52 TAMIL

The study of the language, literature, and culture of the Tamil-speaking people.

12.53 TELUGU

The study of the language, literature, and culture of the Telugu-speaking people.

12.54 URDU

The study of the language, literature, and culture of the Urdu-speaking people.

12.59 OTHER SOUTH ASIAN LANGUAGES

The study of the languages, literatures, and cultures of the South Asian peoples other than the above, such as Bengali.

12. THE STUDY AND USES OF A LANGUAGE* (INTERLAY)

The study of the skills and techniques essential to learning a language.

12. 01 Dialects of a Language (Synchronic and Diachronic)

The study of the written or spoken features of a language such as sounds, forms, constructions, and words, as they vary individually or in related groups with respect to their geographic or social distribution. The study may be synchronic (of a single point in time) or diachronic (historical).

12. 02 History of a Language

The study of the ways in which the various dialects developed in the course of time into a language, including the influence of non-linguistic factors such as social and political change and the processes of general language change as they affected a specific language.

12. 03 A Language and Civilisation

The study of the history of selected events, individuals, groups, institutions, artefacts, ideas, and other phenomena associated with the development of peoples and countries in which a language is predominant.

12. 04 A Language and Contemporary Culture

The study of the patterns of behaviour and beliefs commonly understood and shared by the people of a given socio-economic milieu or geographical location in which a language is predominant.

12. 05 Structure and Grammar of a Language

The study of the meaning-bearing units of a language such as morphemes, words, phrases, and sentences, and their identification and relationships.

12. 06 Listening Comprehension in a Language

The study of the skills and techniques used to improve and measure what is heard and understood in learning a language.

* The blank is used to code the appropriate language.

12. 07 Literature of a Language

The study of all writings in prose or verse, especially those of an imaginative or critical character, including biography, drama, essay, fiction, poetry, myths, and legends.

12. 07 01 Literature by Author

The study of the approach to literature through various authors.

12. 07 02 Literature by Genre

The study of the approach to literature through the various kinds or types of works such as drama, poetry, fiction, and essay.

12. 07 03 Literature by Period

The study of the approach to literature through the various time periods, such as 19th century or 20th century.

12. 07 04 Literature by Place

The study of the approach to literature according to geographical location, such as a country or city.

12. 07 05 Literature by Theme

The study of the approach to literature according to themes, such as freedom, courage, and sentimentality.

12. 07 06 Literature by Other Categories

The study of literature organised by other categories.

12. 08 Reading a Language

The study of the theory, methods and techniques of reading a language.

12. 08 01 Beginning Reading

The study of the activities involved in teaching pupils to read following necessary readiness activities designed to develop understanding of the relationship between oral and written language, recognition of symbols (letters) and symbol-sound relationships, and appreciation of the reading process.

12. 08 02 Developmental Reading

The study of the methods and techniques designed to help pupils to develop sequentially all aspects of reading proficiency needed by a mature reader.

12. 08 03 Reading Readiness

The study of the methods and techniques of developing in children the mental, physical, and emotional maturity prerequisite to instruction in reading, emphasising direct and vicarious experiences involving oral language, such as listening, speech habits and patterns, sequential organisation of ideas, vocabulary development, and experience with books and stories.

12. 08 04 Remedial Reading

The study of the nature and use of diagnostic and remedial activities for individual pupils or groups of pupils, designed to correct and prevent further reading difficulties which interfere with the pupil's expected progress in developing reading skills, understandings, and appreciations.

12. 09 Speaking a Language

The study of the theory, methods, and skills that are essential to the proper speaking of a language.

12. 10 Writing a Language

The study of the theory, methods, and skills that are needed for writing a language.

12. 10 01 Composition

The study of the principles and techniques of selecting, combining, arranging and developing ideas, and expressing them in appropriate written forms, such as narration, description, exposition, or persuasion.

12. 10 02 Creative Writing

The study of the techniques of composition that involve some degree of spontaneity and exercise of the imagination on the part of the writer, such as found in short stories, verse, drama, and personal forms of writing.

12. 10 03 Rhetoric and Style

The study and analysis of the effective use of language, including an examination of the patterned use of language for its effect.

12. 10 04 Technical Writing

The study of the theory, methods, and skills needed for writing scientific, research, or formal language.

12. 10 05 Writing Conventions and Usage

The study of the techniques of using basic writing skills, including handwriting, spelling, capitalisation, punctuation, and appropriate word choice.

12. 99 Other Study and Uses of Language (Specify)

12.99 OTHER LANGUAGE, LINGUISTICS, AND LITERATURE (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

13. LAW

PERSPECTIVES ON LAW

Subject matter concerned with the principles and procedures accepted, developed and enforced by institutions of government, for the social order, in the form of legislation, common law and decisions.

13.01 INTERNATIONAL ASPECTS OF LAW

The study of the law concerned with the rules, institutions, and procedures governing transactions, relationships, and events that affect two or more nation-states or cut across national boundaries; including the methodology of such study.

13.01 01 Comparative Law

The comparative study of the sources, concepts, and methods of different historical or contemporary legal systems.

13.01 02 Foreign Legal Systems

The study of legal systems other than that of South Africa.

13.01 03 Private International Law

The study of the jurisdiction of the tribunals, the choice of rules of law and the force of judgments, in cases involving transactions touching two or more states or nations.

13.01 04 Public International Law

The study of the law concerned with the rules, institutions, and procedures governing international relations and the conduct of nation-states and other entities, including the process of law-creation through custom and treaty; jurisdiction of states over territory, resources, and persons; the law of the sea; the law governing the use of force, war, and neutrality; international protection of human rights; procedures for settling international disputes; the law relating to multinational (international) organisations.

13.01 99 Other International Aspects of Law (Specify)

13.02 PERSPECTIVES ON LAW

The study of law or of a particular system in a broader context, including historical, philosophical (or comparative) analysis.

13.02 01 Legal History

The study of the development of the law and legal institutions of South Africa, giving attention to the political, social, economic, and intellectual factors determining such development, including the study of the history of the legal systems which have in the course of history contributed to the above development.

13.02 02 Introduction to the Theory of Law

An elementary study of the basic concepts and principles, origin, history, sources, functions and divisions of the law; and of certain approaches to the science of law and legal philosophy.

13.02 03 Jurisprudence

The study of philosophical issues relating to the nature, sources and purposes of the law, including a historical and critical study of general theories of law and legal science; the analysis of fundamental concepts and principles of law and legal science.

13.02 04 Roman Law

The study of the legal system developed by ancient Rome, including its history and sources.

13.02 99 Other Perspectives on Law (Specify)

13.03 MERCANTILE LAW

The study of the law relating to business, including the law relating to companies, partnerships, financial institutions, negotiable instruments, immaterial property, competition, insolvency, insurance, labour relations, taxation, carriage, shipping and maritime matters and commercial financing.

13.03 01 The Law of Associations

The study of the law relating to voluntary associations, including companies and partnerships.

13.03 01 01 Company Law

The study of the characteristics, capacity and powers of companies, and their organisation, financing, control, management and liquidation.

13.03 01 02 Law of Partnerships

The study of the nature, purposes, formation, trading and dissolution of partnerships.

13.03 02 Law of Financial Institutions

The study of the law relating to banks, building societies, insurers, cooperative societies and other financial institutions.

13.03 03 Law of Negotiable Instruments

The study of the law governing the use, form, transfer and discharge of negotiable instruments and the rights and liabilities of holders and other parties.

13.03 04 Immaterial Property Law

The study of the law relating to immaterial property, including goodwill, copyright, patents, industrial designs and trade marks.

13.03 05 Law of Competition

The study of the law relating to the protection of goodwill, the prevention of unfair competition and the regulation of monopolistic conditions.

13.03 06 Law of Insolvency

The study of the law relating to insolvency, including voluntary surrender and compulsory sequestration, the effects of sequestration, voidable dispositions, the functions of the trustee, composition and rehabilitation.

13.03 07 Law of Insurance

The study of the law relating to the contract whereby risk is transferred to the insurer, including the nature and formation of such contract, duties of the insured and the insurer, the premium, the insurable interest, the doctrine of subrogation as well as compulsory motor vehicle insurance.

13.03 08 Labour Law

The study of the law relating to labour relationships and employment contracts, including collective bargaining, the determination of minimum conditions of employment, the regulation of conditions of employment, apprenticeships, workmen's compensation and unemployment insurance.

13.03 09 Tax Law

The study of the law relating to fiscal duties and levies imposed by the central, provincial and local governments, including income tax, estate duty, donations tax, sales tax, excise duty, import duty, stamp duty, transfer duty and property tax.

13.03 10 Shipping Law

The study of the law and practices governing the carrying of goods and passengers at sea.

13.03 11 Law of Carriage

The study of the law relating to the transport of goods and passengers by land, including road transport licensing.

13.03 12 Commercial Financing Law

The study of the law relating to the financing of business transactions, including exchange control, the limitation of financial charges and the control of credit transactions.

13.03 99 Other Mercantile Law (Specify)

13.04 PRIVATE LAW

The study of the law concerned with the interests of legal subjects, and the relations between these subjects on an equal, co-ordinated footing, including the law relating to obligations, family, person, succession, things, unjustified enrichment, water and trusts.

13.04 01 Law of Obligations

The study of the law relating to juristic bonds between two or more parties in terms of which the party or parties on the one side have a right to a performance and the party or parties on the other side have a duty to render that performance, including contracts, delict and unjust enrichment.

13.04 01 01 Law of Contract

The study of the law relating to the formation and legal effect of agreements made with the intention of creating obligations, including the interpretation, enforcement, performance, termination and remedies for their breach of such agreements.

13.04 01 02 Law of Delict

The study of the law relating to wrongful acts, other than breaches of contract, resulting in patrimonial damage or injury to personality.

13.04 01 03 Law concerning other obligations

The study of the law relating to obligations other than those flowing from contract or delict, including the law of unjustified enrichment.

13.04 02 Family Law

The study of the law relating to the formation, consequences and termination of marriage and the juristic relationships in the family, including the relationship between husband and wife, parent and child, and guardian and ward.

13.04 03 Law of Persons

The study of the law relating to the origin and end of legal subjects, their rights, duties and capacities and the factors affecting their legal status.

13.04 04 Law of Succession

The study of the law relating to the devolution of a person's estate after his death, including the requirements for testamentary dispositions, the construction of wills, and the duties, powers and liabilities of executors and administrators.

13.04 05 The Law of Trusts 10 10.21

The study of the law concerning property held in trust, including the establishment, termination, and characteristics of trusts, the duties, powers and liabilities of trustees, and the rights of beneficiaries.

13.04 06 The Law of Things

The study of the law relating to the acquisition, exercise, transfer, and termination of real rights.

13.04 07 Water Law

The study of the law relating to the conservation and utilisation of water resources.

13.04 08 The Law of Mines and Minerals

The study of the law relating to the acquisition and disposition of mineral rights and the regulation and control of the prospecting for and the mining and exploitation of mineral resources.

13.04 99 Other Private Law (Specify)

13.05 PUBLIC LAW

The study of the law concerned with matters of public or general interest, including administrative law, constitutional law, criminal law, the interpretation of statutes, medical jurisprudence and communication law.

13.05 01 Administrative Law

The study of the law governing the organisation, powers and the exercise of these powers by the executive authorities of the state, including the relationship between these authorities inter se and the relationship between these authorities and private individuals.

13.05 02 Constitutional Law

The study of the law concerned with the organisation of the legislative, judicial and administrative authorities of the state and the demarcation and exercise of their powers.

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13.05 03 Criminal Law

The study of the law concerned with acts of commission or omission against the state, a person, property or other interests, which have been proscribed by society and for which legal sanctions are imposed, including the determination of sanctions to be imposed on those deemed guilty of criminal offences.

13.05 04 Interpretation of Statutes

The study of the law relating to the rules and guidelines used to construe legislation.

13.05 05 Medical Jurisprudence

The study of the principles of medical science that concern juridically relevant facts, i.e. forensic medicine, as well as the study of the legal principles relating to the practice of medicine and health services, i.e. medical law.

13.05 06 Communication Law

The study of the legal principles concerning mass communication media, and their effect upon the rights of the private individual and the interests of the state.

13.05 99 Other Public Law (Specify)

13.06 FORMAL LAW

The study of the jurisdiction, procedures, remedies and sanctions of civil and criminal courts and of other instances instituted for the settlement of disputes.

13.06 01 Law of Arbitration

The study of the legal rules and processes whereby legal disputes are settled by persons or instances other than the civil courts, and appointed for that purpose by law or in terms of an agreement between the parties concerned.

13.06 02 Law of Civil Procedure

The study of the jurisdiction, procedures and remedies of civil courts.

13.06 03 Law of Criminal Procedure

The study of the legal rules governing the operation of the criminal justice system and the application of substantive criminal law to the individual, such as a consideration of the prerogatives of and limitations upon the State in the restraint of an individual's liberty, the requisition and use of facts, the filing of criminal pleadings, the conduct of the trial proceedings and the formal aspects of sentencing.

13.06 04 Law of Evidence

The study of the manner in which facts are proved in civil or criminal proceedings in courts or administrative agencies, including the introduction and exclusion of evidence through witnesses and documents.

13.06 99 Other Formal Law (Specify)

13.07 THE LAW RELATING TO BLACK PERSONS IN SOUTH AFRICA

The study of the indigenous law of the black peoples of South Africa and of the legislation affecting them in particular.

13.07 01 Indigenous Law

The study of the indigenous private, public and formal law of the black peoples of Southern Africa.

13.07 02 The Law of African Administration

The study of the South African legislation on administrative, constitutional and judicial matters relating to the black population groups of South Africa.

13.07 99 Other Law relating to Black Persons in South Africa (Specify)13.08 LEGAL PROFESSION

The study of the organised branches of the legal profession, the techniques employed in their services, specialised fields of their practice, their professional responsibilities and the delivery of legal services to the public.

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LIBRARIES AND MUSEUMS 1A

13.08 01 Conveyancing

The study of the legal rules and techniques relating to the registration of real rights.

13.08 02 Notarial Practice

The study of the legal rules and techniques relating to the professional practice of a notary public.

13.08 03 Legal Aid

The study of the rules and procedures relating to the provision of free legal services to indigent members of the public.

13.08 04 Legal Ethics

The study of the ethical obligations and standards of conduct applicable to members of the legal profession in their relations with clients, the courts, other lawyers and the public.

13.08 05 Legal Techniques

The study of the specialised techniques used by lawyers in their professional practice such as the drafting of contracts, pleadings and other documents; court technique including cross-examination; negotiation and mediation; and office management.

13.08 99 Other Legal Profession (Specify)

13.99 OTHER LAW (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

LIBRARIES AND MUSEUMS 1A

The study of all laws, ordinances, regulations, etc. which apply to the functioning of libraries and museums.

14 LIBRARIES AND MUSEUMS

The study of the legal rules and techniques relating to the subject matter concerned with the knowledge and skills required

to develop, organise, store, retrieve, administer, and facilitate

the use of collections of information in such formats as books,

documents, manuscripts, machine-readable data bases, filmed and

recorded materials, specimens, artefacts, and other objects of

permanent value.

14.01 LIBRARIES AND MUSEUMS IN PERSPECTIVE

The study of the aims, basic problems, identity, and significance of libraries and museums in order to give those involved with them the proper perspective on, and cultural and social understanding of, their involvement.

14.01 01 History of Libraries and Museums

The study of the history of the development of physical records and of libraries and museums.

14.01 02 Library and Museum Professions

The study of the library and museum professions, including the organisation and ethics of, and training for, these professions, as well as their relationship with other professions.

14.01 03 Libraries and Museums in Social Perspective

The study of libraries and museums in relation to their social and cultural environment, including the differentiation of these services according to the needs of the different user groups.

14.01 04 Library and Museum Legislation

The study of all laws, ordinances, regulations, etc. which apply to the functioning of libraries and museums.

14.01 99 Other Libraries and Museums in Perspective
(Specify)

14.02 PHYSICAL RECORDS

The study of the origin and characteristics of various physical forms of materials found in libraries and museums and the problems related to the collection, organisation, management, control, and administration of those physical records.

14.02 01 Reason for Existence of Physical Records

The study of the various reasons and circumstances that lead to the recording of knowledge in the form of a physical record.

14.02 02 Relationship between the Physical Record and its Author/Originator

The study of the relationships between physical records and their authors/originators, including the study of the organisations concerned with the production and distribution of these records.

14.02 03 Growth, Scope and Nature of Physical Records

The study of the growth, scope and nature of physical records, including a study of the different forms of physical records (for example printed documents, machine-readable data bases, filmed and recorded materials, specimens, artefacts), publications types (newspapers, periodicals etc.), reprographics, etc.

14.02 03 01 Archives

The study of the collection, organisation, preservation, service, and retrieval of public records, documents of historical significance, and other archival materials.

14.02 03 02 Artefacts and Specimens

The study of the selection, evaluation, organisation, and preservation of man-made objects or artefacts and of samples or specimens of animals, plants, or minerals collected for study.

14.02 03 03 Books
 The study of the selection, evaluation, organisation, and preservation of books such as treatises, novels, etc.

14.02 03 04 Journals
 The study of the selection, evaluation, organisation, and control of periodicals, magazines, daily newspapers, and journals.

14.02 03 05 Manuscripts
 The study of the collection, organisation, preservation, service, and retrieval of original manuscript source materials.

14.02 03 06 Material Production
 The study of the techniques used in the production of material in libraries, museums, and information centres.

14.02 03 07 Non-print Materials
 The study of the selection, evaluation, organisation, control, and use of films, recordings, and other non-printed materials.

14.02 03 08 Official Publications
 The study of the selection, evaluation, organisation, control, and administration of official publications of local, provincial, and national governments, as well as foreign, domestic, and international agencies.

14.02 03 09 Reference Material
 The study of the selection, evaluation, collection, organisation, administration and use of reference materials such as encyclopaedia, bibliographies, and dictionaries.

14.02 04 Collection Management
 The study of the selection, collection, preparation, classification, storage, maintenance, cataloguing, and control of materials in libraries and museums.

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14.02 04 01 Cataloguing of Collections

The study of the principles, techniques, and skills necessary to describe the physical characteristics, and identify the subject relationship of information resources in libraries and museums.

14.02 04 02 Classification of Collections

The study of the principles, techniques, and skills necessary to organise all library and museum formats of information resources for retrieval.

14.02 04 03 Maintenance of Collections

The study of the principles and techniques of keeping library and museum materials in all formats in usable condition.

14.02 04 04 Preservation of Collections

The study of the principles and techniques of protecting library and museum materials in all formats from destruction.

14.02 04 05 Registration and Documentation of Collections

The study of the principles and techniques of officially recording library and museum formats and verifying their authenticity.

14.02 04 06 Restoration of Collections

The study of the principles and techniques of renewing or returning library or museum materials to their former, normal or original unimpaired condition.

14.02 04 07 Security of Collections

The study of the principles and techniques of protection and precaution for reducing the risks of theft, vandalism, fire, or other damage to persons or objects in libraries and museums.

14.02 04 08 Selection and Acquisition of Collections

The study of the principles, aids, techniques, and skills necessary for acquiring all formats of library or museum information resources, including the principles, aids and processes necessary for identification, evaluation and selection.

14.02 04 09 Storage of Collections

The study of the principles and techniques of depositing usable library and museum materials not regularly in use for safe keeping.

14.02 99 Other Physical Records in Libraries and Museums
(Specify)

14.03 INFORMATION

The study of the information content of physical records.

14.03 01 Information as Phenomenon

The study of information as a phenomenon.

14.03 02 Information Storage and Retrieval

The study of the collection, classification, storage and retrieval of information, including the study of different services, filing systems, and various methods of making information accessible, such as indexing, classification, etc.

14.03 03 Information Processing and Use

The study of the processing and use of information.

14.03 99 Other Information (Specify)

14.04 LIBRARY AND MUSEUM USERS

The study of the characteristics, needs, and attitudes of groups and individuals who avail themselves of the materials, services, and functions that are provided by libraries and museums.

14.04 01 Relationship between the Physical Record and the User

The study of the relationship between the physical record and the user, including the study of ways of identifying and characterising the different user groups.

14.04 02 User Utilisation Patterns

The study of the different utilisation patterns of physical records by different user groups, including library and museum orientation and user guidance.

14.04 03 User Motivation

The study of the motivation for the use of physical records, and of the circumstances under which physical records are utilised, including the study of such topics as the reading and information requirements of different user groups and exhibiting techniques.

14.04 04 User Influence of Physical Records

The study of the influence of different physical records on users.

14.04 05 Selected Library and Museum User Groups

The study of the characteristics, needs, and attitudes of selected groups who avail themselves of the materials, services, and functions that are provided by libraries and museums.

14.04 05 01 Pre-school Users

The study of the characteristics, needs, and attitudes of groups and individuals who have not yet reached the age of compulsory school attendance and who use the materials, services, and functions of libraries and museums.

14.04 05 02 Child Users

The study of the characteristics, needs, and attitudes of groups and individuals of school age who use the materials, services, and functions of libraries and museums.

14.04 05 03 Adolescent Users

The study of the characteristics, needs, and attitudes of groups and individuals who have not yet reached the age of majority or adulthood and who use the materials, services, and functions of libraries and museums.

14.04 05 04 Adult Users

The study of the characteristics, needs, and attitudes of groups and individuals who are considered adults and who use the materials, services, and functions of libraries and museums for recreation or research, or for the purpose of increasing their knowledge.

14.04 05 05 Aged User Groups

The study of the characteristics, needs, and attitudes of groups and individuals who are generally retired or over 65 years of age and who use the materials, services, and functions of libraries and museums.

14.04 05 06 Disadvantaged Users

The study of the characteristics, needs, and attitudes of groups and individuals who are disadvantaged because of their academic, socio-economic, or cultural position and who use the materials, services, and functions of libraries and museums.

14.04 05 07 Ethnic User Groups

The study of the characteristics, needs, and attitudes of groups and individuals who are members of any recognizable racial, or ethnic group who use the materials, services, and functions of libraries and museums.

14.04 05 08 Handicapped Users

The study of the characteristics, needs, and attitudes of groups and individuals who are mentally retarded, hard of hearing, visually handicapped, emotionally disturbed, or whose health is otherwise impaired and who by reason thereof require special education and related services to assist them in using the materials, services, and functions of libraries and museums.

14.04 05 09 Users at Post-secondary Education Institutions

The study of the characteristics, needs, and attitudes of groups and individuals who are enrolled in a post-secondary education institution and who use the materials, services, and functions of libraries and museums associated with their institution.

14.04 05 10 Research and Technological Users

The study of the characteristics, needs, and attitudes of groups and individuals who are affiliated with a research institute or a technological enterprise, or who are actively engaged in research and who use the materials, services, and functions of libraries and museums.

14.04 99 Other Library and Museum Users (Specify)

14.05 LIBRARY AND MUSEUM SERVICES AND FUNCTIONS

The study of the principles, techniques, and attitudes necessary to facilitate the use of libraries and museums by individuals or groups.

14.05 01 Advisory Services

The study of methods and techniques for evaluating users' and visitors' needs and interests and for providing guidance in the use of the libraries and museums and their contents to meet these needs.

14.05 02 Library and Museum Exhibits

The study of the methods and techniques of displaying materials for public viewing in libraries and museums.

14.05 03 Public Education Services and Functions

The study of the essential techniques, knowledge, and attitudes that are needed to provide services for public education by libraries and museums.

14.05 04 Reference and Retrieval

The study of the knowledge, principles, and techniques necessary to determine the user's needs, assist in identifying and interpreting pertinent information as required by the user, and to recover and make available such information from storage; including the study of current awareness services, selective dissemination of information services, bibliographic services and computerized reference and retrieval techniques.

14.05 05 Story Telling

The study of the knowledge, principles, and techniques necessary to transmit narrative in prose or verse to interest, amuse, or instruct a variety of users of libraries or museums.

14.05 99 Other Library and Museum Services and Functions (Specify)

14.06 ADMINISTRATION OF LIBRARIES AND MUSEUMS

The study of management applications and trends, organisational structure, decision-making processes, economic trends, and management of personnel and finance in libraries and museums; including the study of the organisation and functioning of typical library and museum divisions and of the computerization of library and museum functions.

14.06 01 Academic Library Administration

The study of the organisation and administration of learning resource centres and libraries in post-secondary educational institutions and research centres.

14.06 02 Art Gallery Administration

The study of the administration of art galleries and their services, including collecting, restoring, preserving, maintaining and exhibiting art objects, artefacts, paintings, portraits and other artistic renditions, and furnishing information of historical, artistic, and general public interest.

14.06 03 Library Administration

The study of the administration of libraries and related services including collecting, preserving, maintaining, and furnishing information of historical, artistic, scientific, or technological significance, or of general public interest.

14.06 04 Multi-library Systems Administration

The study of the organisation and administration of inter-organisational arrangements such as consortia, networks, and co-operative plans among libraries and among other information agencies.

14.06 05 Museum Administration

The study of the administration of museums, art galleries, and botanical and zoological gardens and related services, including collecting, authenticating, preserving, maintaining, exhibiting, and furnishing information on collections of historical, artistic, scientific, or technological significance, or of general public interest.

14.06 06 National Library Administration

The study of the administration of libraries which have to deliver services on a national level including the collection and maintenance of a national bookstock, the furnishing of union catalogues and national bibliographical aids.

14.06 07 Public Library Administration

The study of the organisation and administration of the provincial library services and other public library services, including economic trends, forms of control, structure, adult education standards, and problems of measurement.

14.06 08 School Library and Media Centre Administration

The study of the organisation and administration of school libraries and media centres, including supervision and functional requirements of libraries and media centres, and standards and problems of measurement.

14.06 09 Special Library Administration

The study of the organisation and administration of libraries devoted to specific subject fields or interest groups.

14.06 10 Zoological Garden Administration

The study of the organisation and administration of zoological gardens, including current trends, modern techniques of communication, research, evaluation, and planning for future services.

14.06 99 Other Administration of Libraries and Museums
(Specify)

14.07 FACILITIES FOR LIBRARIES AND MUSEUMS

The study of the methods of planning, arranging, budgeting for, and utilising space in library and museum facilities.

14.07 01 Environmental Requirements

The study of the heat, light, and other physical requirements necessary for storing, maintaining, and displaying materials in library and museum facilities.

14.07 02 Space Requirements

The study of factors essential to determination of need for space and its utilisation required for storing, maintaining, displaying, and using materials, and for administration, in library and museum facilities.

14.07 99 Other Facilities for Libraries and Museums
(Specify)

14.08 EQUIPMENT FOR LIBRARIES AND MUSEUMS

The study of electronic technology, automation, apparatus, furnishings, and other items required to operate libraries and museums.

14.08 01 Audio Equipment

The study of the use of sound equipment in libraries and museums.

14.08 02 Reprographic Equipment

The study of the principles and techniques involved in the use of equipment for reproduction, microreproduction and enlargement.

14.08 03 Video and Visual Equipment

The study of the use of equipment in libraries and museums which transmits visual images as in television, films, slides, and photographs.

14.08 99 Other Equipment for Libraries and Museums
(Specify)

14.99 OTHER LIBRARIES AND MUSEUMS (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

15 LIFE SCIENCES AND PHYSICAL SCIENCES

Subject matter concerned with the systematic study of objects or processes of matter, energy, and associated phenomena.

15.01 ASTRONOMY

The study of matter and energy in the universe, including the solar system, stars, galaxies, and nebula.

15.01 01 Cosmology

The study of principles, theories, and philosophy concerned with the nature of the universe as a whole, including its origin and evolution.

15.01 02 Solar Astronomy

The study of the sun and the astronomical bodies that orbit it, including their positions, dimensions, motion, composition, and evolution.

15.01 03 Stellar Astronomy

The study of the stars and their positions, dimensions, motions, composition, and evolution.

15.01 99 Other Astronomy (Specify)

15.02 ATMOSPHERIC SCIENCES

The study of the chemical and physical properties of the mass of air surrounding the earth.

15.02 01 Climatology

The study of climates, including their causes and effects, classification, and regional or global influences.

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15.02 02 Meteorology

The study of weather, including air masses and their motions, temperature, atmospheric pressure, clouds, and precipitation, and their relatively short-term interrelationships on local, regional, and global scales.

15.02 99 Other Atmospheric Sciences (Specify)15.03 BIOLOGICAL SCIENCES

The study of life, including the structure, function, reproduction, growth, heredity, evolution, behaviour, and distribution of living organisms.

15.03 01 Biological Behaviour

The study of the responses of living organisms to a variety of stimuli.

15.03 02 Cytology

The study of the cell as a unit of organisation in plants and animals.

15.03 03 Developmental Biology

The study of the development of organisms, including growth, differentiation, and morphogenesis.

15.03 04 Ecology

The study of the interrelationships among organisms and their environments.

15.03 05 Embryology (See 09.01 05 - Embryology)

The study of the growth, development, structure, and functions of embryos.

15.03 06 Evolution

The study of the genetic changes through which groups of organisms acquire morphological, physiological, and behavioural characteristics which distinguish them from other living things.

- 15.03 07 Genetics
The study of the inheritance of traits and characteristics of organisms.
- 15.03 08 Histology (See 09.01 09 - Histology)
The study of the tissues of organisms through selection and preparation of microscopic sections.
- 15.03 09 Limnology
The study of the nature and interrelationships of fresh-water organisms and their aquatic environments.
- 15.03 10 Marine Biology
The study of the nature and interrelationships of salt-water organisms and their aquatic environments.
- 15.03 11 Microbiology
The study of micro-organisms including bacteria, viruses, protista, protozoans, and certain fungi.
- 15.03 12 Molecular Biology
The study of the molecular structure and processes of living organisms.
- 15.03 13 Parasitology (See 09.01 14 03 - Parasitology)
The study of the structure, reproduction, development, distribution, and control of plant and animal parasites.
- 15.03 14 Radiobiology
The study of the nature and effects of radiation on organisms and biological systems.
- 15.03 15 Taxonomy and Systematics
The study of the identification, naming, and classification of organisms.

15.03 16 Mycology (See 09.01 14 02 - Mycology)

The study of the morphology, physiology, taxonomy, and ecology of fungi.

15.03 17 Phycology

The study of the morphology, physiology, taxonomy, and ecology of algae.

15.03 18 Plant Anatomy

The study of the structure of plants including their tissues and systems.

15.03 19 Plant Pathology

The study of the nature, causes, and development of plant diseases.

15.03 20 Plant Physiology

The study of plant functions, including such metabolic processes as photosynthesis, respiration, assimilation, and transpiration.

15.03 21 General Zoology

The study of animals, including their structure, function, reproduction, growth, heredity, evolution, behaviour, and distribution.

15.03 22 Animal Anatomy

The study of the structure of animals including their tissues, organs, and systems.

15.03 23 Animal Pathology

The study of the nature, causes, and development of animal diseases.

15.03 24 Animal Physiology

The study of animal functions, including metabolic processes such as respiration, digestion, excretion, reproduction, and circulation.

15.03 25 Entomology

The study of insects, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 26 Herpetology

The study of reptiles and amphibians, including their morphology, physiology, ecology, and taxonomy.

15.03 27 Ichthyology

The study of the fishes, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 28 Mammology

The study of mammals, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 29 Ornithology

The study of birds, including their life cycle, morphology, physiology, ecology, and taxonomy.

15.03 99 Other Biology (Specify)

15.04 CHEMISTRY

The study of the micro and macro structure of matter, of the changes matter undergoes, of the energy involved in these changes, and of the models that interpret and the theories and laws that describe these phenomena.

15.04 01 General Chemistry

The study of the properties of and changes in matter with emphasis on interpretations at the molecular level, serving as the usual introduction to further work in chemistry.

15.04 02 Analytical Chemistry

The study of the chemical and physical methods and techniques needed for the qualitative, quantitative, and often structural characterisation of a sample, including the proper procedures for obtaining representative samples for analyses and the statistical procedures for evaluating the precision and accuracy of the results.

15.04 03 Biochemistry (See 09.01 02 - Biochemistry)

The study of the chemistry of living systems, including the isolation, characterisation, and definition of the role of substances associated with processes taking place in living systems, and the study of the biological phenomena that result from the interactions, including energy changes, among these substances.

15.04 04 Electrochemistry

The study of electrochemical phenomena and the reactions occurring when electrons are transferred from one substance to another, including electrode potentials, electrochemical cells, current-voltage-time relationships, and the interconversion of electrical and chemical energy.

15.04 05 Inorganic Chemistry

The study of all the elements and their compounds, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances, but excluding the hydrocarbons and most of their derivatives.

15.04 06 Macro-molecular Chemistry

The study of the synthesis, structure, reactions, properties, and uses of substances composed of large molecules formed from repeating units of smaller molecules or molecular fragments. Such macro-molecules (polymers) may be organic or inorganic and may be of synthetic or natural origin, and their study includes their characterisation both in solution and in the solid state, and the relationships among reaction variables, physical properties, and use characteristics.

15.04 07 Nuclear Chemistry and Radiochemistry

The study of atomic nuclei, including their natural and induced disintegration, fusion and fission processes, the associated radiation of subatomic particles and their detection and measurement, and their energy relationships.

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15.04 08 Organic Chemistry

The study of the hydrocarbons and their derivatives, either synthetic or produced by living organisms, including the isolation, compositions, structures, physical and spectroscopic properties, syntheses, energy relationships, and chemical transformations of these substances.

15.04 09 Physical Chemistry

The study of the theoretical and experimental investigation of matter, with emphasis on the most fundamental aspects of structure and bonding, and the relationships to the mechanisms and energy changes of transformations.

15.04 10 Surface Chemistry

The study of the unique properties of surfaces, including the analysis of the surface layer, the preparation of ultra-pure surfaces, and the catalytic properties of surfaces.

15.04 11 Specialised Areas of Chemistry

Areas of chemistry not reflected in the above categories that include chemical oceanography, chemistry of genetics, clinical chemistry, cosmochemistry, crystallographic chemistry, ecological chemistry, forensic chemistry, geochemistry, industrial chemistry, magnetic chemistry, marine chemistry, materials science, medicinal chemistry, molecular spectroscopy, organometallic chemistry, photochemistry, quantum chemistry, solid-state chemistry, theoretical chemistry, wood chemistry, petrochemistry and homogeneous catalysis.

15.04 99 Other Chemistry (Specify)

15.05 GEOLOGY

The study of the earth and other celestial bodies, including their composition, structure, history and related changes.

15.05 01 Crystallography and Chrystal Chemistry

The study of the atomic arrangement and bonding in minerals.

15.05 02 Economic Geology

The study of the economic potential, occurrence, formation and distribution of ore deposits.

15.05 03 Geomorphology

The study of the structure, origin and evolution of land forms.

15.05 04 Geohydrology (See 08.06 04 - Hydrology)

The study of water, including its forms, properties and distribution in the earth's crust.

15.05 05 Mineralogy

The study of minerals including their physical and chemical properties, classification, and identification.

15.05 06 Palaeontology

The study of the fossil evidences of prehistoric life.

15.05 07 Petrology

The study of the genesis, nature, composition (chemical and mineralogical), mode of occurrence, and classification of rocks.

15.05 08 Sedimentology

The study of the nature and origin of rocks formed by sedimentary processes.

15.05 09 Seismology

The study of earthquakes and artificially produced vibrations in the earth.

15.05 10 Stratigraphy

The study of age relationships and superimposition of rock units.

15.05 11 Structural Geology
The study of deformation in the earth's crust.

15.05 99 Other Geology (Specify)

15.06 OCEANOLOGY
The study of oceans and other large bodies of water, including the measurement and interpretation of their physical and biological dynamics.

15.07 PHYSICS
The study of matter and energy, and their interactions as they relate to elementary particles and fields, nuclei, atoms, molecules, condensed matter, the earth and celestial bodies.

15.07 01 General Physics

The study of the basic philosophy, theories, methods and techniques of physics, including the communication, education, history and philosophy of physics; mathematical methods in physics; classical and quantum physics; mechanics and fields; relativity and gravitation; statistical physics and thermodynamics; measurement science, general laboratory techniques, and instrumentation systems; and specific instrumentation and techniques of general use in physics.

15.07 02 Physics of Elementary Particles and Fields

The study of the fundamental particles of matter that are smaller than atomic nuclei with more than one nucleon, and the associated radiation, including the general theory of fields and particles; specific theories and interaction models; particle systematics; specific reactions and phenomenology and the properties of specific particles and resonances.

15.07 03 Nuclear Physics

The study of atomic nuclei, including their structure, properties, transformative energies, and radiation, and the interaction of radiation

with nuclei, including nuclear structure; nuclear decay and radio-activity; nuclear reactions and scattering; properties of specific nuclei and experimental methods and instrumentation for elementary particle and nuclear physics.

15.07 04 Atomic and Molecular Physics

The study of atoms and molecules, including their structure, properties, formative energies, and radiation, and their interaction with radiation, including the theory of the electronic structure of atoms and molecules; atomic and molecular spectra and interactions with photons; atomic and molecular collision processes and interactions; experimentally derived information on atoms and molecules; instrumentation and techniques in atomic and molecular physics and studies of special atoms and molecules.

15.07 05 Classical Areas of Phenomenological Physics

The study of the classical areas of phenomenological physics, including electricity and magnetism; fields and charged particles; optics; acoustics; heat flow, thermal and thermodynamic processes; mechanics, elasticity, rheology and fluid dynamics.

15.07 06 Fluids, Plasmas and Electric Discharges

The study of fluids, plasmas and electronic discharges, including the kinetic and transport theory of fluids; physical properties of gases; and the physics of plasmas and electric discharges.

15.07 07 Structure, and Thermal and Mechanical Properties of Condensed Matter

The study of the structure, and thermal and mechanical properties of condensed matter, including the structure of liquids and solids; crystallography; mechanical and acoustic properties of condensed matter; lattice dynamics and crystal statistics; equations of state, phase equilibria and phase transitions; thermal properties of condensed matter; transport properties of non-electronic condensed matter; quantum fluids and solids; liquid and solid helium; surfaces and interfaces; and thin films and whiskers.

15.07 08 Electronic Structure and Electrical, Magnetic and Optical Properties of Condensed Matter

The study of the electronic structure and electrical, magnetic and optical properties of condensed matter, including electron states; electronic transport in condensed matter; electronic structure and electrical properties of surfaces, interfaces, and thin films; superconductivity; magnetic

properties and materials; magnetic resonances and relaxation in condensed matter; mossbauer effect; dielectric properties and materials; optical properties and condensed matter spectroscopy and other interactions of matter with particles and radiation; electron and ion emission by liquids and solids and impact phenomena.

15.07 09 Cross-Disciplinary Physics

The study of the cross-disciplinary areas of physics, such as materials sciences and biophysics.

15.07 09 01 Materials Science

The study of the chemical and physical properties of different materials.

15.07 09 02 Biophysics (See 08.04 05 - Biophysics)

The study of biological phenomena using physical principles and methods.

15.07 10 Astrophysics and Geophysics

The study of the physical and chemical composition of celestial bodies, and of the interactions between matter and radiation within celestial bodies and in interstellar space; and the study of the effects of physical phenomena on the earth.

15.07 10 01 Astrophysics

The study of the physical and chemical composition of celestial bodies, and of the interactions between matter and radiation within celestial bodies and in interstellar space.

15.07 10 02 Geophysics

The study of the effects of physical phenomena on the earth.

15.07 99 Other Physics (Specify)

15.08 GENERAL EARTH-SPACE SCIENCE

The study of earth-space science in its entirety with no major emphasis on any specific subcategories within the subject-matter area.

15.99 OTHER LIFE SCIENCES AND PHYSICAL SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

16 MATHEMATICAL SCIENCES

Subject matter concerned with the sciences of logical symbolic language and their applications.

16.01 MATHEMATICAL SCIENCES, GENERAL PERSPECTIVES

The study of the history and role of mathematics in human culture and its relationship to other fields of knowledge, including the investigation of the philosophical foundation, content, and educational aspects of mathematics.

16.01 01 Philosophy of Mathematics

The study of the theories, methodology, and assumptions which underlie the mathematical sciences, mathematical activities, and thought, and the study of the underlying relationships between the mathematical sciences and other fields of knowledge, activity, and thought.

16.01 02 History of Mathematics

The study of the development of mathematical sciences and mathematical activities from historical or cultural perspectives; the examination of the interrelationship between the mathematical sciences and areas such as the physical sciences, the arts, government, and technological development; and the biographical examination of mathematicians, statisticians, and other individuals involved in or directly influencing the development of the mathematical sciences and mathematical activities.

16.01 03 Content of Mathematics

The study of the subject matter areas of the mathematical sciences, their description, content, and development, and the interrelationships among the various subject areas, including examination of the subject areas of the mathematical sciences with regard to heuristic considerations.

16.01 99 Other Mathematical Sciences, General Perspectives (Specify)

16.02 LOGIC, SETS, AND FOUNDATIONS

The study of the development of mathematical languages, reasoning, and concepts from a priori perceptions of logic, sets of objects and counting, and the investigation of the general properties of theoretical structures and proofs.

16.02 01 Intuitive Logic and Sets

The study of logical operations in sets, such as counting, partitioning, classifying, union, intersection, and complement.

16.02 02 Mathematical Logic

The study of mathematical theories from the viewpoint of model theory, recursive function theory, proof theory, and set theory.

16.02 03 Finite Sets

The study of sets whose elements can be indexed by integers 1, 2, 3...n, inclusive.

16.02 04 Graph Theory

The study of the combinatorial structure of figures consisting of vertices connected by line segments.

16.02 05 Combinatorics

The study of the identification and classification of structures that can be formed from simpler elements by prescribed rules of combination.

16.02 06 Infinite Sets

The study of sets that are not finite, including induction, axiom of choice, category, and topological set theory.

16.02 99 Other Logic, Sets, and Foundations (Specify)

16.03 ARITHMETIC AND ALGEBRA

The study of numbers and operations upon numbers, including the symbolic and structural abstractions of the number concept.

16.03 01 Arithmetic

The study of whole numbers and fractions, as well as the algorithms for performing addition, subtraction, multiplication, and division with these numbers.

16.03 02 Algebra

The study of the use of variables to represent numbers or other concepts, the rules for manipulating such symbolic representations, and the solution of linear and quadratic equations.

16.03 03 Number Theory

The study of the properties of the positive integers, including topics such as primes, divisibility, congruence, and integer solutions of certain equations or systems of equations.

16.03 04 Algebraic Geometry

The study of algebraic equations or systems of equations which define geometric configurations in the plane or space, extending to equations whose coefficients are not only real or complex numbers, but also elements of more general fields or rings and for which the geometric configurations exist in higher-dimensional spaces.

16.03 05 Algebraic Structures

The study of the generalisations of the basic structures of elementary mathematics as found in the system of integers, and the system of rational numbers, up through the system of vectors, stressing the features common to all of these systems, including the concepts of groups, rings, and fields.

16.03 06 Linear and Multilinear Algebra

The study of finite dimensional vector spaces and linear transformations or mappings of a vector space into itself, extending to spaces of infinite dimensions or systems in which several linear relationships exist between sets of variables or vectors.

16.03 07 Universal Algebra

The study of the abstract extensions that can be developed from the properties of algebraic structures, leading to a language for discussing all algebraic systems of a given type.

16.03 08 Group Theory

The study of the properties of structures in algebra which consist of a set of elements and one operation upon this set, extending to the study of the structure of all finite groups and infinite groups and to the use of group theory in other areas of mathematics and science.

16.03 99 Other Arithmetic and Algebra (Specify)

16.04 CLASSICAL ANALYSIS

The study of functions of real or complex variables, limiting processes involving such functions, solution of equations involving these processes, and representation and classification of functions in terms of similar concepts or functions.

16.04 01 Calculus

The study of limiting processes for functions of real or complex variables, especially differentiation and integration.

16.04 02 Real Analysis

The study of discipline associated with analytic properties such as continuity, differentiability, and integrability of functions of real variables.

16.04 03 Measure and Integration

The study of spaces in which a measure has been defined, real and complex valued functions on such spaces and integrals of such functions, families of functions, and integrals defined without regard to a measure.

16.04 04 Complex Analysis

The study of the discipline associated with analytic properties such as continuity and differentiability of functions of complex variables. It also includes the representation of complicated functions in terms of simpler ones, classes of complex-valued functions, and the study of the real or imaginary part of a differentiable function, known as potential theory.

16.04 05 Special Functions

The study of particular classes of functions, including Bessel functions, which arise in certain problems in differential equations or mathematical physics; series representations of other functions in terms of special functions; and integral representations in terms of special functions.

16.04 06 Ordinary Differential Equations

The study of the solution of equations or systems of equations containing one or more unknown functions of a single real variable, along with derivatives of these functions, and quantitative and qualitative properties of solutions or classes of solutions.

16.04 07 Partial Differential Equations

The study of the solution of equations containing functions of several real variables along with partial derivatives of these functions, usually over a restricted domain of the independent variables and subject to conditions on the function and its derivatives on some or all of the boundary of this domain; quantitative and qualitative properties of solutions or classes of solutions; and methods of solutions applicable to certain classes of equations.

16.04 08 Finite Differences and Functional Equations

The study of the solution of equations involving unknown functions, other than differential or integral equations, and in particular, equations which relate the values of the unknown function at two or more algebraically related variables.

16.04 09 Ergodic Theory

The study of transformations and their iterates, or families of transformations, which are defined on a measure space and preserve the measure. Particular attention is given to asymptotic properties and to classification and representation of such transformations.

16.04 10 Fourier Series and Integrals

The study of infinite series of trigonometric functions and integral transforms with a trigonometric kernel, convergence and summability of such series and integrals, and representation of continuous or integrable functions in terms of such series and integrals.

16.04 11 Integral Equations and Transforms

The study of integral equations which involve an unknown function appearing in an integrand. The integral transform of a function is defined as the integral of the product of the given function and a fixed function.

16.04 12 Calculus of Variations

The study of problems where an unknown function is sought that will maximise or minimise, within a given class, an integral or more general function which involves the unknown function.

16.04 99 Other Classical Analysis (Specify)

16.05 FUNCTIONAL ANALYSIS

The study of algebraic and topological structures in infinite dimensional spaces and mappings between such spaces.

16.05 01 Hilbert Spaces and Operators

The study of linear spaces in which an inner product has been defined, and of linear operators from one such space to another or to the real or complex numbers, including classification and representation of such spaces and functions.

16.05 02 Topological Vector Spaces

The study of linear spaces in which a topology is defined for which the linear operations are continuous, including functions or operators from one such space to another; classification and representation of such spaces and functions; and particular categories of such spaces with their special properties.

16.05 03 Abstract Harmonic Analysis

The study of generalisations of the classical theory of Fourier series or integrals, usually involving topological groups, topological algebras, or Hilbert space.

16.05 04 Topological Groups

The study of infinite groups in which a topology is defined for which the group operations are continuous, as well as special topological groups or categories of such groups. The study of continuous homomorphisms of such a group to finite dimensional Euclidean spaces, and their use in analysing other functions on the group, is included.

16.05 05 Topological Algebras

The study of linear algebras in which a topology is defined for which the algebraic operations are continuous, including special categories of such algebras.

16.05 06 Convexity

The study of the special properties of functions and families of functions defined in a subset of an infinite dimensional space which derives from the fact that the subset is convex, or that the functions preserve convex combinations.

16.05 07 Distributions (Generalized Functions)

The study of certain linear spaces of real or complex valued functions in a topological vector space, where the functions are designed to extend properties of ordinary functions of a real or complex variable, including the use of such generalized functions in solving classical problems in analysis.

16.05 99 Other Functional Analysis (Specify)

16.06 GEOMETRY AND TOPOLOGY

The study of spatial concepts and relations, either of the real world or an abstract conceptual universe, the classification of shapes and forms, and the imposition of numerical or descriptive structures on such forms.

16.06 01 Plane and Solid Geometry

The study of properties of figures of the plane and three-dimensional space that are invariant under translation and rotation.

16.06 02 Trigonometry

The study of the properties of triangles, the relations between sides and angles of triangles, and the applications of triangles.

16.06 03 Analytic Geometry

The study of the application of algebraic procedures to geometry wherein position is represented analytically by co-ordinates.

16.06 04 Geometries

The study of the special geometries that are induced by groups of allowable spatial figures, including their common properties and the comparisons between them.

16.06 05 Convex Bodies

The study of geometric objects with the property that, given a line segment with both end points lying in the body, the entire line segment lies within the body.

16.06 06 Differential Geometry

The study of curves and surfaces using the methods of differential calculus.

16.06 07 Manifolds and Cell Complexes

The study of locally Euclidean space by reticulation.

16.06 08 General Topology

The study of infinite sets of points or functions, admitting all possible choices of neighbourhoods in them, including the topics of compactness, connectedness, and convergence.

16.06 09 Algebraic Topology

The study of topological properties of figures using the methods of abstract algebra.

16.06 10 Global Analysis

The study of those properties of geometric figures, functions, and function spaces that are determined by the whole configuration in contrast with those properties that are determined by the local neighbourhoods.

16.06 11 Topological Dynamics

The study of the general theory of transformation groups, algebraic theory of minimal sets, structure theorems, flows induced by vector fields, and symbolic flows.

16.06 99 Other Geometry and Topology (Specify)

16.07 PROBABILITY

The study of the mathematical discipline dealing with the description and interpretation of chance phenomena.

16.07 01 Finite Probability

The study of probabilistic models involving a finite number of outcomes.

16.07 02 Theory of Probability

The study of mathematical models for the description of chance phenomena.

16.07 03 Limit Theorems

The study of theorems dealing with the limiting distribution of random variables depending on a parameter n as n increases indefinitely.

16.07 04 Markov Processes

The study of the stochastic process where the probability distribution for the state at any future instant depends only on the present state.

16.07 05 Stochastic Processes

The study of a family (X_t) of variates with t assuming values in a given range; frequently X_t represent an observation at time t .

16.07 06 Foundations of Probability

The study of interpretations of probability and possible axiomatisations of the theory of probability.

16.07 07 Monte Carlo Methods

The study of the solution of a mathematical problem based on constructing a possibly artificial probabilistic model of the mathematical process and then performing sampling experiments to obtain an approximate solution.

16.07 99 Other Probability (Specify)

16.08 STATISTICS

The study of the science of collecting, describing, and interpreting numerical data.

16.08 01 Descriptive Statistics

The study of methods for the tabular and graphic representation of numerical and categorical data and the computation of summary values.

16.08 02 Applied Statistics

The study of statistical methods used in the solution of real world statistical problems.

16.08 03 Mathematical Statistics

The study of the mathematical bases of statistical theories and methods.

16.08 04 Parametric Inference

The study of the process of generalising from a sample to the population from which the sample has been drawn. In parametric inference, the population distribution is assumed known except for the value of one or several unknown parameters. The problem then is to estimate the unknown parameters or test hypotheses about the unknown parameter values on the basis of sample information.

16.08 05 Non-parametric Inference

The study of the process of drawing inferences when little or nothing is known about the population distribution. Since non-parametric inference methods do not depend on the population distribution type, they are often referred to as distribution-free methods.

16.08 06 Linear Models

The study of models in which the equations connecting variates are in linear form. Regression and analysis of variance models are special cases of linear models.

16.08 07 Multivariate Analysis

The study of the analysis of data which is in multivariate form.

16.08 08 Experimental Design

The study of how to design the collection of sample observations required to solve a given inference problem.

16.08 09 Sample Surveys

The study of the methodology, statistical consequences, and practice of selecting observations or sampling units from a population for purposes of inference.

16.08 10 Decision Theory

The study of the mathematical analysis of decision-making under uncertainty.

16.08 11 Time Series Analysis

The study of analysis of data relating to a stochastic process in which the parameter is time.

16.08 12 Reliability and Quality Control

The study of the failure rate of individual components and systems of components, and the study of statistical procedures for controlling and improving the quality of manufactured products.

16.08 99 Other Statistics (Specify)

16.09 NUMERICAL ANALYSIS AND APPROXIMATION THEORY

The study of algorithms for computation and approximation, including analysis of their accuracy.

16.09 01 Numerical Analysis

The study of methods for finding numerical approximations to the solutions of mathematical problems, including analysis of the errors arising in the implementation of these methods.

16.09 01 01 Matrix Numerical Analysis

The study of numerical analysis of finite sets of linear equations, of eigenvalue problems, and of other problems involving matrices.

16.09 01 02 Numerical Integration

The study of numerical quadrature and numerical solution of differential equations.

16.09 01 03 Error Analysis

The study of methods for estimating the difference between the numerical solution and the theoretical solution of a problem.

16.09 02 Approximation Theory

The study of methods for approximating an unknown mathematical object by members of a given set of similar objects subject to a given criterion of good approximation, such as approximating a function by simpler functions or a problem solution by solutions of simpler problems.

16.09 02 01 Interpolation

The study of approximation theory in which the objects are functions that agree in value on a predetermined set of points in their common domain.

16.09 99 Other Numerical Analysis and Approximation Theory
(Specify)

16.10 CLASSICAL APPLIED MATHEMATICS

The study of the physical universe by means of analytical models.

16.10 01 Mechanics of Particles and Systems

The study of motion and energy in collections of point masses that can be treated as concentrated at a point.

16.10 01 01 Statics of Rigid Bodies

The study of forces, moments, and equilibrium in bodies whose point masses are fixed relative to one another.

16.10 01 02 Kinematics of Particles and Rigid Bodies

The study of states of pure motion of a system without regard to forces, inertia, or other physical causes of the motion.

16.10 02 Mechanics of Solids

The study of substances that have definite volume and shape and which resist forces that tend to alter their volume or shape.

16.10 03 Fluid Mechanics

The study of statics and dynamics of fluids and the propagation of energy in them.

16.10 04 Optics and Electromagnetic Theory

The study of the propagation of light and other electromagnetic radiation as a branch of mechanics.

16.10 05 Relativity

The study of the form of mechanics in which all effects of one mass on another are projected with the finite speed of light, including special relativity in which space-time is flat, and general relativity which admits curved space-time.

16.10 06 Quantum Mechanics

The study of mechanics dealing with the transfer of energy between the electromagnetic field and point masses, or charges, under Planck's law of the quantum of action.

16.10 07 Statistical Mechanics

The study of the mechanics of aggregates of particles described by statistical measures rather than by the individual co-ordinates of each particle.

16.10 08 Classical Thermodynamics

The study of the mechanics of interaction between heat energy and the kinetic energy of particles under the laws of classical physics rather than the quantum law.

16.10 09 Mathematical Astronomy, Astrophysics, and Cosmology

The study of mathematical principles fundamental to understanding solar systems, stars, galaxies, and the universe as a whole.

16.10 10 Mathematical Geophysics and Meteorology

The study of mathematical principles fundamental to understanding the physical phenomena of the earth and atmosphere.

16.10 99 Other Classical Applied Mathematics (Specify)

16.11 APPLICATIONS OF MATHEMATICS

The study of real world systems by deterministic and probabilistic models.

16.11 01 Mathematics of Business and Finance

The study of the application of mathematics and statistics to problems in business and finance.

16.11 02 Actuarial Mathematics

The study of mathematical and statistical methodology dealing with problems of risks in insurance.

16.11 03 Mathematics of Economics

The study of mathematical and statistical models and methodology in economics.

16.11 04 Game Theory

The study of formulation and solution of mathematical and statistical decision problems as games.

16.11 05 Mathematical Programming

The study of the formulation and solution of problems in optimising an objective, or criterion function subject to a set of constraints.

16.11 06 Control Theory and Optimal Control

The study of the formulation and optimisation of systems governed by differential equations under a functional mapping called the control.

16.11 07 Mathematical and Statistical Biology

The study and application of mathematical and statistical models and methodology in Biology.

16.11 08 Mathematical and Statistical Psychology

The study and application of mathematical and statistical models and methodology in psychology

16.11 09 Mathematical and Statistical Sociology

The study and application of mathematical and statistical models and methodology in sociology.

16.11 10 Communication Theory

The study of the logic and modelling of mathematical systems which create, transmit, and evaluate messages.

16.11 10 01 Mathematical Information Theory

The study of the number of possible choices of messages, expressible as a value of some monotonic function of the number of choices.

16.11 10 02 Cybernetics

The study of human control functions and of mechanical and electrical systems designed to replace them, involving the application of statistical mechanics to communication engineering.

16.11 11 Multivariate Data Analysis

The study and use of mathematical, statistical, and graphic methods for revealing the form and pattern of multivariate interrelationships among both the variables and the samples, including cluster analysis and numerical taxonomy.

16.11 99 Other Applications of Mathematics (Specify)

16.12 USER-ORIENTED MATHEMATICS

The study of the applications of basic mathematical concepts and procedures to situations encountered by persons in everyday life or in vocational settings.

16.12 01 Business Mathematics

The study of those aspects of mathematics which apply particularly to business problems.

16.12 02 Consumer Mathematics

The study of the various applications of mathematics, such as informal algebra and geometry, which apply particularly to consumer problems, including ratios, proportions, and percentages.

16.12 99 Other User-oriented Mathematics (Specify)

16.99 OTHER MATHEMATICAL SCIENCES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

17 MILITARY SCIENCES

Subject matter concerned with the causative factors and tactical principles of warfare, armed conflict, and defence.

17.01 MILITARY HISTORY

The study of the historical basis and fundamentals of the principles of war, of combat and the conduct of war, of national security, and of the use of force.

17.01 01 History of Warfare

The study of the historical development of military thought and actions as practised by world leaders and military organisations.

17.01 02 South African Military History

The study of the development of military services, national defence, and military engagements in South Africa from the landing of Jan van Riebeeck to the present.

17.01 03 Aerospace History

The study of the evolution and development of air power from balloons and dirigibles through jet aircraft and rockets.

17.01 04 Army History

The study of the evolution and development of military land forces, including men, material, and systems used in armed conflicts, national defence, or world peace.

17.01 05 Naval History

The study of the evolution and development of naval forces, including men, material, and systems used in armed conflicts, national defence, or world peace.

17.01 99 Other Military History (Specify)

17.02 MILITARY ORGANISATION

The study of the structure and principles of the chain of command and control in the branches and units of the military services.

17.02 01 Organisation of the Defence Force

The study of the structure and principles of the chain of command and control in the Defence Force.

17.02 02 Organisation of the Air Force

The study of the structure and principles of the chain of command and control in the Air Force.

17.02 03 Organisation of the Army

The study of the structure and principles of the chain of command and control in the Army.

17.02 04 Organisation of the Marine Corps

The study of the structure and principles of the chain of command and control in the Marine Corps in military services having such a branch.

17.02 05 Organisation of the Navy

The study of the structure and principles of the chain of command and control in the Navy.

17.02 99 Other Military Organisation (Specify)

17.03 MILITARY MANAGEMENT AND LEADERSHIP

The study of management and leadership theory, methods, and principles as applied to the military, including assumption of command, senior-subordinate relationships, chain of command, span of control, and supervisory and motivational techniques.

17.04 NATIONAL SECURITY AND DEFENCE

The study of the formulation and implementation of South African security policy, the development of South African military institutions, and the operation of the national security system in South Africa.

17.05 MILITARY LAW

The study of the provisions and application of the law specifically relating to the South African Defence Force and its members, including the civil law privileges of such members, the Defence Act, the Military Disciplinary Code, the regulations and orders issued in terms thereof and the international law of war.

17.06 INTERNATIONAL MILITARY SYSTEMS

The study of the structure and dynamics of the relationship and balance of power between nations, international politics, and the military systems maintained by the nations of the world.

17.07 MILITARY COMMUNICATIONS

The study of command, control, and communications systems used in the tactical or strategic employment of military personnel.

17.08 FIELD TRAINING, CAMPS, AND CRUISES

The study of the application of the topics of military science to realistic environments as sponsored and provided by the armed services.

17.09 DRILL, COMMANDS, AND CEREMONIES

The study of and practical training in the nomenclature, positions, movements, courtesies and honours, and other aspects of unit leadership in formal marching or other precise military manoeuvres.

17.10 WEAPONRY AND MARKSMANSHIP

The study of the characteristics, maintenance, and functioning of weapons for use in attack or defence, and of the techniques of sighting and shooting weapons.

17.11 MILITARY FIRST AID AND HEALTH EDUCATION

The study of techniques of personal hygiene and health control; dressing and protection of wounds; and first aid, lifesaving, and rescue measures that are encountered in the military environment.

17.12 AIR FORCE

The study of the role of the Air Force in the contemporary world, including the total force structure, strategic offensive and defensive forces, general purpose forces, and aerospace support force.

17.12 01 Military Aeronautics

The study of the basic elements of flight and the utilisation of aircraft for military purposes and national defence.

17.12 02 Military Aerospace

The study of the design, construction, operation, and maintenance of aircraft and space vehicles as utilised by the Air Force for military purposes and national defence.

17.12 03 Military Astronautics

The study of space programmes and technology as utilised by the Air Force for military purposes and national defence.

17.12 99 Other Air Force (Specify)

17.13 ARMY

The study of the purpose and objectives of the Army and all its branches, its rank structure, its customs and traditions, and its importance in national defence and security.

17.13 01 Military Tactics

The study of the principles and techniques of manoeuvring small to large groups of combat forces into a plan of action for gaining an advantage or success.

17.13 02 Land Navigation and Map Reading

The study of military maps, photographs, and terrain for solving tactical and administrative problems by plotting, ascertaining, and directing the movement of ground forces.

17.13 99 Other Army (Specify)17.14 MARINE CORPS

The study of the purpose and objectives of the Marine Corps and all its branches in countries having such a branch in their military service, its rank structure, its customs and traditions, and its importance in national defence and security.

17.15 NAVY

The study of the purpose and objectives of the Navy and all its branches, its rank structure, its customs and traditions, and the importance of seapower and naval service in national defence and security.

17.15 01 Maritime Heritage and Affairs

The study of the role of seapower and seamen, including the merchant marines, in the growth and development of South Africa and the impact of such development on national maritime policy.

17.15 02 Navigation and Naval Operations

The study of the theory, principles and procedures of ship navigation, movements, and deployment.

17.15 03 Seamanship

The study of the fundamentals of the art of handling, working, and navigating naval ships and small craft.

17.15 04 Naval Ship Systems

The study of the types, structure, and purpose of naval ships, including ship construction and compartment designation, propulsion systems, communication and control systems, and naval ordnance systems.

17.15 99 Other Navy (Specify)

17.99 OTHER MILITARY SCIENCES (SPECIFY) 4810-1010-01

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

1. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

2. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

3. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

4. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

5. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

6. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

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8. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

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10. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

11. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

12. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

13. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

14. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

15. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

16. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

17. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

18. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

19. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

20. The study of military science, including the study of military strategy, tactics, and operations, and the study of military history and military thought.

18 PHILOSOPHY, RELIGION AND THEOLOGY

Subject matter concerning Philosophy : a critical analysis of and radical reflection on the ideas, theories, categories, concepts and methods for describing and evaluating human experience and reality.

Subject matter concerning Religion : the investigation of origin, history, institutional forms, beliefs and practices; and Theology, man's scientific, historically determined response to the revelation of God concerning Himself and His relationship to the cosmic reality.

18.01 SYSTEMATIC PHILOSOPHY

The constructive analysis of the ideas, theories, categories, concepts and strategies applied in the examination and solving of philosophical puzzles within the different branches and problem-areas of philosophy.

18.01.01 Logic, Methodology and Philosophy of Science

The study of the structure of arguments and the criteria of valid inference, together with a critical examination of the methodology of the sciences, and the conditions and presuppositions of rational inquiry.

18.01.01.01 Informal Logic

The study of everyday modes of arguments, and of recurring types of informal fallacies with a view to developing skills of critical thinking and clarity of verbal communication.

18.01.01.02 Formal and Symbolic Logic

The study of patterns of arguments and rules of inference by means of formalized logical language or calculus.

18.01.01.03 Philosophy of Mathematics

The study of the nature of mathematics based on a logical and philosophical examination of its fundamental concepts and methods.

18.01.01.04 Philosophy of Natural Science

The study of the nature of natural sciences, especially of the methodology of scientific inquiry, its presuppositions, concepts, and its place in the general scheme of intellectual pursuits.

18.01.01.05 Philosophy of Social Science

The study of the philosophical problems arising out of intellectual investigations into the functioning of human societies and into the relations of individuals within it, including problems regarding the research methodologies used by investigators in the social sciences.

18.01.02 Ontology and Theories of Reality

The study of philosophical theories of existence or being as such, an analysis of the categories and concepts used, and a critical examination of and reflection on the various problem-areas relating to man and reality.

18.01.03 Philosophy of Nature or Cosmology

The study of the philosophical theories about the structure of the natural world and a critical examination of the categories and concepts used.

18.01.04 Philosophical Anthropology

The study of philosophical theories about man and a critical examination of the categories and concepts used.

18.01.04.01 Philosophy of Action

The study of philosophical problems arising in connection with such concepts as conscious, voluntary, or purposive behaviour; weakness of will; and questions about the interrelationship of subjects and object.

18.01.04.02 Philosophy of Mind

The study of such topics as personal identity, the problem of other minds, the mind-brain-problem and the unity of consciousness.

18.01.05 Philosophy of Culture

The study of philosophical theories about culture in general, its nature, place and function in man's life, and of the interrelationships between the different areas in which man tries to humanize nature.

18.01.05.01 Social and Political Philosophy

The study of philosophical theories about man as a socio-political being, the conditions and principles of social organizations, and a critical examination of the categories and concepts employed.

18.01.05.02 Philosophy of Language

The study of philosophical theories about the structure of human language as meaningful communicative action, and of the criteria of differentiating the language of humans from that of other creatures.

18.01.05.03 Philosophy of History

The study of philosophical theories about the meaning of history, and a critical examination of the methods of inquiry into the past.

18.01.05.04 Philosophy of Religion

The study of philosophical theories about the nature, value and function of religion, and a critical examination of the logic of religious language.

18.01.05.05 Philosophy of Law

The study of philosophical theories about the nature and function of law, and a critical examination of the methods of inquiry into law and the relations between legality, personal morality, and social ethics.

18.01.05.06 Philosophy of Literature

The study of the philosophical theories about literature, and a critical examination of the exegetical problems posed by metaphor and other figurative uses of language.

18.01.05.07 Philosophy of Education

The study of the philosophical theories about education as a cultural phenomenon, its nature and value, the methods of educational processes, and of the philosophical presuppositions on which they rest.

18.01.06 Axiology or Theory of Values

The study of the philosophical theories about values, and a critical examination of the philosophical and methodological questions arising from such problems as the fact-value-relation, and the logic of normative discourse.

18.01.06.01 Aesthetics or Philosophy of Art

The study of philosophical theories about the nature and value of art and a critical examination of the concepts and standards of critical evaluation.

18.01.06.02 Ethics

The study of philosophical theories of morality and standards of conduct, and a critical examination of the categories, concepts and logic of moral or ethical judgement.

18.01.06.02.01 Personal Moralities

The study of that part of Ethics dealing with the codes and conduct of individuals, the assessment of individual aspirations, and of the motivations determining individual action.

18.01.06.02.02 Social Ethics

The study of that part of Ethics dealing with the codes, conduct and customs of social groups, the influence of group norms on individual behaviour, and the rational reconcilability of conflicting norms.

18.01.06.02.03 Ethics of Professions

The study of the ethical or moral dilemmas of particular relevance to the practitioners of designated occupations or professions, and the criteria for assessing resolutions of these dilemmas.

18.01.06.02.04 Metaethical Theories

The study of the meaning and logic of ethical terms and discourse, and a critical examination of the theories regarding the relationships between Ethics and other branches of philosophy.

18.01.07 Epistemology or Theory of Knowledge

The study of philosophical theories about truth and the bases, extent and limitations of human knowledge, and a critical examination of the conditions, principles and concepts used in describing and analyzing cognition.

18.01 99 Other Systematic Philosophy (Specify)

18.02 HISTORY OF PHILOSOPHY

The study of philosophical systems and ideas, of the categories and concepts used and of possible interrelationships between particular philosophies.

18.02.01 Ancient Western Philosophy

The study of philosophical systems, ideas and positions from pre-Socratics through Plato, Aristotle, and their immediate successors.

18.02.02 Medieval Western Philosophy

The study of medieval philosophical systems, ideas and positions, their interrelationships, problems and concepts.

18.02.03 Modern Western Philosophy

The study of philosophical systems, ideas and positions from the Renaissance through the nineteenth century.

18.02.04 Contemporary Western Philosophy

The study of the philosophical systems, ideas and positions dating from the beginning of the twentieth century.

18.02.05 Oriental Philosophy

The study of oriental philosophical systems, ideas and positions.

18.02.06 Jewish Philosophy

The study of Jewish philosophical systems, ideas and positions.

18.02 99 Other History of Philosophy (Specify)

18.03 MAIN PHILOSOPHICAL CURRENTS AND TRENDS

The study of the main philosophical trends and currents in philosophy, its presuppositions, ideas, strategies and categories for solving philosophical puzzles, and of the interrelationships between different philosophical currents.

18.03.01 Rationalism

The study of the philosophical outlook or program based on the assumption that an a priori reason is the key to substantial truth about men and the world.

18.03.02 Empericism

The study of the philosophical outlook or program based on the assumption that experience rather than reason is the source of knowledge.

18.03.03 Idealism

The study of the philosophical outlook or program based on the assumption that mind and spirit are fundamental in the world as a whole.

18.03.04 Positivism

The study of the philosophical outlook or program based on the assumption that science is the only valid knowledge and facts the only possible objects of knowledge.

18.03.05 Marxism

The study of the philosophical outlook or program based on the viewpoints of Karl Marx.

18.03.06 Materialism/Naturalism

The study of the philosophical outlook or program that matter (nature) is all there is; that there is no supernatural being and that scientific method is the only reliable means of inquiry.

18.03.07 Existentialism

The study of the philosophical outlook or program which, generally speaking, is not grounded in an abstract or absolutist idea of truth, but in an analysis of consciousness and the existing individual's situation in the world.

18.03.08 Pragmatism

The study of the philosophical outlook or programme which tries to clarify the meaning of conceptions and propositions by considering the practical consequences of the conception.

18.03.09 Phenomenology

The study of the philosophical outlook or program which proceeds from a descriptive analysis of the structures of all phenomena or modes of experiencing phenomena with the aim to inquire into the foundations of the sciences.

18.03.10 Structuralism

The study of the philosophical outlook or program which defines the problem of meaning as a structural issue and consequently decentralizes the human subject as a constitutive element in the theory of meaning.

18.03.11 Analytical Philosophy or Linguistic Analysis

The study of the philosophical outlook or program based on analysis as against speculation; that philosophy is not a body of propositions but an activity and that the object of its analytic concern is language.

18.03 99 Other Main Philosophical Currents and Trends
(Specify)

18.04 SCIENCE OF RELIGION

The scientific study of religion.

18.04.01 History of Religion

The study of the history of religion as a general phenomenon.

18.04.02 Specific Religions

The study of the origin, history, organized forms, beliefs, worship and practices of Buddhism, Christianity, Hinduism, Islam, Judaism, Primal Religions and other specific religions.

18.04.03 Philosophy of Religion

The study of the relevance of the methods and content of philosophical thought for religion and theology.

18.04.04 Phenomenology of Religion

A phenomenological analysis of the spirituality and outer forms of religion.

18.04.05 Anthropology of Religion

The study of religion through the use of the theories and methods of anthropology.

18.04.06 Psychology of Religion

The study of religion through the use of the theories and methods of psychology.

18.04.07 Sociology of Religion

The study of religion through the use of the theories and methods of sociology.

18.04.08 Religion and Culture

The study of the relationships between religion and culture.

18.04.09 Comparative Science of Religion

The study of religions through the use of the theories and methods of comparative and historical analysis.

18.04.99 Other Science of Religion (Specify)18.05 BUDDHISM

The study of the religious and philosophical system based on the teachings of Gautama the Buddha and founded in India in the sixth century B.C.

18.05.01 History and Evolution18.05.01.01 Historical Origin

The study of the origin and historical background of Buddhism in the context of the religious practices and cultural traditions of ancient, pre-Buddhist India.

18.05.01.02 The Buddha

The study of the life and times, myths and legends associated with Gautama the Buddha.

18.05.01.03 Religious Setting

The study of the interaction between Buddhism and other contemporary Indian religious traditions and philosophical systems.

18.05.01.04 Sects of Schools of Thought

The study of the socio-religious factors which initiated the Buddhist Councils and caused the emergence of the various sects and schools of thought.

18.05.01.05 Spread and Development

The study of the socio-political, cultural and religious factors which influenced, at various historical periods, the geographical spread and periodic decline and revival of Buddhism.

18.05.01.06 Buddhism in the Western World

The study of the contact and interaction of Buddhism with Western religion, art and culture and modern philosophical, psychological and scientific thought.

18.05.02 Religious Doctrines and Philosophical Systems18.05.02.01 Comparative and Systematic Studies

The comparative study and systemic analysis of the distinguishing religious and philosophical features characterising the various Buddhist sects and schools of thought.

18.05.02.02 Hinayana Buddhism

The study of the fundamental teachings of early Buddhism, intrinsic to the Hinayana tradition.

18.05.02.03 Abhidharma

The study of the psychology, philosophy and ethics in the Abhidharma system.

18.05.02.04 Principles of Mahayana Buddhism

The study of the fundamental religious principles and philosophical thought which form the basis of the Mahayana tradition.

18.05.02.05 The Madhyamika System

The study of the philosophical principles and religious outlook of the dialectical school of the Madhyamika (Sunyavada).

18.05.02.06 The Yogacara System

The study of the philosophical principles, psychological attitude and religious outlook of the idealistic (mentalistic) school of the Yogacara (Vijnanavada).

18.05.02.07 Logic

The study of the philosophical principles and method of the logical-epistemological school of Dignaga and Dharmakirti.

18.05.02.08 Vajrayana

The study of the history, theory and practice of Tantric Buddhism.

18.05.02.09 Zen

The study of the history, theory and practice of Zen (Ch'an) Buddhism.

18.05.02.10 Pure Land

The study of the history, theory and practice of Pure Land Buddhism.

18.05.03 Religious Method and Practice18.05.03.01 Religious Methodology

The comparative study of the moral codes and discipline, ritual, devotional practices and introspective techniques used in the various Buddhist religious systems.

18.05.03.02 The Sangha

The study of the history, principles and practice of Buddhist monasticism.

18.05.03.03 Mysticism

The study of the transpersonal and mystic element in Buddhism.

18.05.03.04 Popular Buddhism

The historical study and critical evaluation of lay Buddhist practices.

18.05.03.05 Contemporary Buddhist Practice

The study of the place, status and prospects of Buddhism as a practised religion in modern Eastern and Western society.

18.05.04 Social Function and Ethical Ideals18.05.04.01 Hinayana Ethics

The study of the nature and meaning of Hinayana ethics and its relevance to ancient and modern Eastern and Western Society.

18.05.04.02 Mahayana Ethics

The study of the Mahayana ethical ideal and its relevance to ancient and modern Eastern and Western society.

18.05.04.03 Social Function

The study of Buddhist religious values in the context of the structure and function of human society, Eastern and Western, past and present.

18.05.05 Literature and Scholarship18.05.05.01 Pali Literature

The study of the text of the traditional Pali Canon and other literature associated with the Hinayana tradition.

18.05.05.02 Sanskrit Literature

The study of the Sanskrit texts associated with the Mahayana tradition.

18.05.05.03 Non-Indian Literature

The study of the traditional texts associated with the non-Indian Buddhist religious systems and schools of thought.

18.05.05.04 Modern Scholarship

The study and evaluation of modern Eastern and Western interpretations and adaptations of traditional Buddhist text and teachings.

18.05.06 Art and Culture18.05.06.01 Religious Symbolism

The study of the sacred principles, religious meaning and psychological nature of Buddhist iconography and religious symbolism.

18.05.06.02 Aesthetic values

The study of the religious basis, psychological function and aesthetic value of Buddhist architecture, sculpture, painting, dance, theatre, poetry and music.

18.05.06.03 Cultural Perspectives

The study of the acculturating effects of Buddhism on ancient and modern Eastern and Western society.

18.05 99 Other Buddhism (Specify)

18.06 CHRISTIANITY

The study of religion and theology based on the Old and New Testament.

18.06.01 Old and New Testament Science

The study of the Old and New Testament and related sources.

18.06.01.01 Introduction Science

The study of the growth, transmission and canonisation of Biblical texts.

18.06.01.02 Old and New Testament History and Background

The study of the history and cultural background of Old and New Testament times.

18.06.01.03 Exegesis

The study of the theory and practice of the exegesis of the Old and New Testament.

18.06.01.04 Biblical Theology

The study of the exposition of the message of the Old and New Testament.

18.06.02 Ecclesiological Studies

The study of the history, development, faith and practices of the church as institution.

18.06.02.01 Church History

The study of the theory of Church History and of the history of the church in its general, particular and local manifestations.

18.06.02.02 History of Dogma

The study of the history of the beliefs, teaching, theology and confessions of the church in the different phases of its existence.

18.06.02.03 Ecumenical Studies

The study of the divisions in and movement towards unity of the Christian church.

18.06.02.04 Ecclesiastical Law and Policy

The study of laws and guidelines by which specific Christian church traditions operate.

18.06.03 Systematic Theology18.06.03.01 Introduction to Theology as a Science

The study of the scientific character of theology as an academic discipline, the relationships between the different theological disciplines, the methodology of theology and its relationships to other sciences.

18.06.03.02 Apologetics

The study of the discussion of the Christian faith with the basic tenets of the spirit of a particular time as well as with the basic tenets of representatives of other religious convictions and views of life.

18.06.03.03 Revelation and Faith

The study of the nature of the Christian revelation and faith.

18.06.03.04 Theology Proper

The study of the revelation of the triune God and of the divine creation, providence and election.

18.06.03.05 Theological Anthropology

The theological study of man and his basic relationships.

18.06.03.06 Hamartiology

The study of the nature and origin of evil and sin.

18.06.03.07 Christology

The study of the nature and deeds of Jesus Christ.

18.06.03.08 Pneumatology

The study of the doctrine regarding the Holy Spirit.

18.06.03.09 Ecclesiology

The study of the nature of the church.

18.06.03.10 The Sacraments

The study of the sacraments of the Christian church.

18.06.03.11 Eschatology

The study of the theological doctrines concerning death, judgement and afterlife.

18.06.04 Theological Ethics

The theological study of the sources and application of principles for individual and group behaviour in the Christian tradition.

18.06.04.01 Moral and Ethical Principles

The study of the sources of principles for individual and group behaviour.

18.06.04.02 History of Theological Ethics

The study of the development of principles for individual and group behaviour in the Christian tradition.

18.06.04.03 Moral and Ethical Issues

The study of the application of theological and religious principles for individual and group behaviour.

18.06.05 Practical Theology

The study of the theory and practice of the communication of the gospel.

18.06.05.01 Homiletics

The study and practice of the preparation and delivering of sermons.

18.06.05.02 Religious Education

The study of the principles and methods of religious instruction in ecclesiastical and secular educational (primary, secondary and tertiary) context.

18.06.05.03 Pastoral Care and Counselling

The study and practice of methods and techniques of providing care and counselling in personal and social context on spiritual and material matters.

18.06.05.04 Church Diaconia

The study of the diaconal calling of the church.

18.06.05.05 Worship and Liturgy

The study of the history, theory and practice of ritual and ceremony in religious services.

18.06.05.06 Church Administration and Leadership

The study of the theory and practice of planning, managing and organising the institutional activities of the church.

18.06.05.07 Christian Communication Science

The study of the relevance and implementation of mass media in communicating the Christian message.

18.06.06 Missiology

The study of the theories and practice of the mission of the Christian throughout the world.

18.06.06.01 History of Mission

The study of the history of the church in its missionary character.

18.06.06.02 Theology of the Christian Mission

The study of the foundations of the Christian mission.

18.06.06.03 Methodology of the Christian Mission

The study of missionary methods with special emphasis on the communication of the gospel in a cross-cultural context, indigenisation, third world theology and new religious movements.

18.06.06.04 Theology of Religions

The evaluation of non-Christian religions from the perspective of Christian theology.

18.06 99 Other Christianity (Specify)

18.07 HINDUISM

The study of Hinduism as the main religious system native to India, beginning with the pre-Aryan elements and following through to modern times.

18.07.01 Early Historical Development

The study of the early historical development of Hinduism.

18.07.01.01 The Indus Valley Civilization

The study of the Indus valley civilization relative to its archaeological remains, paying particular attention to features which may have been precursors to the development of Hinduism.

18.07.01.02 Aryan Culture

The study of the elements of Aryan culture as these are reflected in the early hymns of the Rigveda. Special attention is paid to the features which differentiate this culture from Hinduism.

18.07.01.03 Early Developments

The hypothetical study of the preliminary evolution of Aryan culture in new directions contingent upon the changing social conditions which must have obtained as the Aryans settled in India.

18.07.01.04 Subsequent Philosophical Developments

The study of the development of religious ideas as these are reflected in the developing revealed literature viz.: Vedas, Brahmanas, Aranyakas, Upanishads.

18.07.01.05 Socio-political Developments

The study of socio-political developments as correlative to the development of religious ideas.

18.07.02 Hinduism as a Cultural System

The study of Hinduism as a cultural system.

18.07.02.01 Religious Themes

The study of the great religious themes of Hinduism as these crystallized with the emergence of the classical philosophies.

18.07.02.02 Social System

The study of the social system of Hinduism which crystallized relative to its belief system and which is reflected ideally in the Laws of Manu.

18.07.02.03 Popular Literature

The study of popular literature of Hinduism e.g. the Ramayana, the Mahabharata, and the Puranas as it reflects the central beliefs and values of Hinduism at a popular level.

18.07.02.04 The Bhakti Cultus

The comparative study of the different theological systems of Hinduism paying particular attention to the nature of devotion and to the contrast between these systems and atheological systems of Hinduism.

18.07.03 Modern Developments

The study of modern developments in Hinduism.

18.07.03.01 Historical Background

The study of the historical background which initiated the modern development of Hinduism and which begin with British colonization.

18.07.03.02 Neo-Hindu Movements

The studies of the histories and philosophies of the various neo-Hindu movements and their leaders from Ram Mohan Roy and the Brahma Samaj onwards.

18.07.03.03 Tradition Versus Modernity

The study of the tensions generated by the conflict of reform ideas with traditional religion as reflected in the history of neo-Hindu movements and such figures as Mahatma Gandhi.

18.07.03.04 Assessments of the Future

The analytic explication of some of the problems with which traditional Hinduism is confronted and to which it must adjust if it is to survive.

18.07.04 Hinduism in South Africa

The study of Hinduism in South Africa.

18.07.04.01 Historical Background

The study of the early history and social conditions of Indians in South Africa.

18.07.04.02 Hinduism as a South African Phenomenon

The study of the forms of Hinduism which have survived to express themselves in the South African context.

18.07.04.03 Cultural Movements

The study of the main cultural movements whose task in South Africa is to ensure the survival of Hinduism, including an analysis of the forms of Hinduism for which they stand and of their methods of propagating these forms.

18.07.04.04 Problems

The study of the problems confronting Hinduism in South Africa and the exploration of possible responses to these problems.

18.07.05 Textual Exegesis : The Gita

The study of the theory and practice of the exegesis of the Gita.

18.07.05.01 Historical Background

The study of the historical context in which, and as a response to which the Gita apparently was written.

18.07.05.02 Implicit Philosophical Models

The study of the philosophical systems of which the Gita makes unsystematic use.

18.07.05.03 The Metaphysical System

The study of the view of Reality suggested in the Gita with particular attention being paid to the difficulties of extracting a systematic view.

18.07.05.04 The Value System

The study of the main values upheld in the Gita, of their inter-relationship and of their implications for behaviour.

18.07.05.05 Interpretations

The study of different systematic interpretations of the Gita especially those of Sankara and Ramanuja and paying particular attention to the difficulty of presenting a systematized interpretation.

18.07 99 Other Hinduism (Specify)

18.08 ISLAM

18.08.01 Life of Muhammad the Prophet of Islam

18.08.01 01 The study of the life of the prophet and the original sources in Arabic.

18.08.01.02 The study of the life of the prophet written in other languages.

18.08.02 Islamic History

18.08.02.01 Political and cultural history of the first four caliphs, Abu Bakr, 'Umar, 'Uthman, 'Ali.

18.08.02.02 Political and cultural history of the Umayyads in Damascus and Spain.

18.08.02.03 Political and cultural history of the Abbasids in Baghdad and Egypt.

18.08.02.04 Political and cultural history of the Mamluks in Syria and Egypt.

18.08.02.05 Political and cultural history of the Ottomans, 1258 - 1924.

18.08.02.06 Political and cultural history of the modern Turkey, 1924 to the present time.

- 18.08.02.07 Political and cultural history of Iran, 1501 to the present time.
- 18.08.02.08 Political and cultural history of Muslim Spain and North Africa.
- 18.08.02.09 Political and cultural history of Muslim India, 712 - 1857.
- 18.08.02.10 The Muslim independence movement in India with special reference to the Khilafat movement and to the movement of Sayyid Ahmad Shadid and the emergence of Pakistan in 1947.
- 18.08.02.11 Political and cultural history of Pakistan, 1947 to the present time.
- 18.08.02.12 Political and cultural history of the contemporary Arab world in the Middle East and North Africa.
- 18.08.02.13 Political and cultural history of the present day Muslim world of South Africa, South East Asia and Africa (excluding North Africa).
- 18.08.03 The Qur'an
- 18.08.03.01 The history of the revelation and compilation of the Qur'an.
- 18.08.03.02 Textual study of the Qur'an with special reference to its Surahs and textual divisions.
- 18.08.03.03 The study of the Qur'anic commentaries from the beginning to the present time.
- 18.08.03.04 The study of the principles and science of the Qur'anic commentary.

- 18.08.03.05 The study of the translations of the Qur'an from Arabic into other languages.
- 18.08.03.06 The relationship between the Qur'an and the Hadith.
- 18.08.03.07 The study of the Qur'an as the first primary source of Islamic law.
- 18.08.03.08 The study of the subject matter of the Qur'an i.e. Tawhid, the prophethood of Muhammad, basic tenets of Islam, the pillars of Islam, religious injunctions etc.
- 18.08.04 Hadith and Sunnah of the Prophet Muhammad
The sayings and the practice of the prophet Muhammad.
- 18.08.04.01 The study of the origin and development of the Hadith.
- 18.08.04.02 The study of the development of the science of criticism of the Hadith
- 18.08.04.03 The study of the history and compilation of the six authentic collections of Hadith.
- 18.08.04.04 The study of the Hadith literature other than the six authentic collections of Hadith.
- 18.08.04.05 The study of the Hadith as the second primary source of Islamic law.
- 18.08.05 Islamic Law and Jurisprudence
- 18.08.05.01 The study of the origin and early developments of Islamic law.
- 18.08.05.02 The study of the principles and Science of Islamic Jurisprudence.

- 18.08.05.03 The study of the primary and secondary sources of Islamic law.
- 18.08.05.04 The study of the history of the compilation and codification of the four sunni schools of Jurisprudence.
- 18.08.05.05 The study of the history of the compilation and codification of the Shi'ite School of Jurisprudence.
- 18.08.05.06 The study of the concepts of Ijtihād and Tāqlīd from the beginning to the present time.
- 18.08.05.07 The study of the attitudes of the contemporary Muslim Jurists and legists towards Ijtihād and Tāqlīd and of their efforts to reconstruct and unify all the schools of Jurisprudence.
- 18.08.05.08 The study of the Muslim law and its present status in the Muslim world.
- 18.08.06 Islamic Philosophy
- 18.08.06.01 The study of the history of development of Islamic philosophy.
- 18.08.06.02 The study of the Muslim philosophers with special reference to al-Kindi, al-Farābī, Ibn Rushd and Ibn Tufail.
- 18.08.06.03 The study of the relationship between the Greek philosophy and Islamic philosophy.
- 18.08.07 Islamic Theology
- 18.08.07.01 The study of the early development of Islamic theology.
- 18.08.07.02 The study of the various early schools of theology.
- 18.08.07.03 The study of the Kharijite, Mu'tazilite and Ash'arite, schools of theology.

- 18.08.07.04 The study of the modern trends in Islamic theology.
- 18.08.07.05 The study of the principles and development of Islamic ethics.
- 18.08.08 Islamic Sufism (Tasawwuf)
- 18.08.08.01 The study of the origin and development of Sufism.
- 18.08.08.02 The study of the origin and development of various sufi orders with special reference to the Qadiri, Chishti, Naqshbandi, Suhrawardi, Rifā'i, Shadhili, and Majuddidi orders.
- 18.08.08.03 The study of the modern trends in Sufism.
- 18.08.09 Islamic Political Thought
- 18.08.09.01 The study of the principles of Islamic Government and State.
- 18.08.09.02 The study of the concept of sovereignty and legislation in Islam.
- 18.08.09.03 The study of the status and participation of non-muslims in an Islamic State.
- 18.08.09.04 The study of the modern trends in Islamic political thoughts.
- 18.08.10 Islamic Reform Movements
- 18.08.10.01 The study of the origin and development of various reform movements with special reference to Africa, Middle East, Indo-Pakistan subcontinent and Indonesia.
- 18.08.11 Status of Women in Islam
- 18.08.11.01 The study of the status and rights of women in Islam.

18.08.11.02 The study of the laws governing the relationship between men and women in Islam.

18.08 99 Other Islam (Specify)

18.09 JUDAISM

The study of the religion of the Jewish people.

18.09.01 Sacred Literature

The study of theological texts from Biblical to modern times.

18.09.01.01 Bible

An indepth study of the Pentateuch, Prophets and Writings with emphasis on textual and thematic material.

18.09.01.02 Biblical Exegesis

Analysis of selections of Biblical literature with relevant commentaries and criticism.

18.09.01.03 Ancient Near East

The study of the Bible in the light of archaeological discoveries of the ancient near east.

18.09.01.11 The Oral Law

The survey of midrashic and Talmudic literature, with emphasis on the correlation between the written and the oral law.

18.09.01.12 Midrash

An indepth textual analysis of selections of Midrash, Halachah and Midrash Aggadah.

18.09.01.13 Talmudic Literature

An indepth textual analysis of Mishnaic and Talmudic selections.

18.09.01.14 Talmud Study

Intensive study of a tractate of Talmud with special emphasis on the commentaries of Rashi, Tosaphot and various Rishonim.

18.09.01.21 The Development of Halachah

An analysis of the development of halachah with specific emphasis on the codification thereof.

18.09.01.22 Mishneh Torah

Intensive study of selections of Maimonides' Code and its application.

18.09.01.23 Shulhan Arukh

Intensive study of selections of the code of Rabbi Joseph Caro with commentaries.

18.09.01.31 Responsa Literature

The textual study of selected responsa with emphasis on the methodology and authority thereof.

18.09.01.32 Contemporary Halachic Problems

A survey of contemporary responsa literature with special emphasis on medical ethics and modern issues.

18.09.02 Historical Theology

A study of post-Biblical Jewish Theology and Philosophy.

18.09.02.01 Principles of Faith

Systematic study of theological concepts based on Maimonides' Thirteen Principles of Faith.

18.09.02.11 Rabbinic Theology

The historical study of theological concepts as reflected in the Midrash and the Talmud.

18.09.02.21 Medieval Jewish Philosophy

A comparative study of the theological thought reflected in the writings of the medieval Jewish philosophers.

18.09.02.22 The Theological System of Maimonides

An intensive systematic study of the thought of Maimonides as reflected in the Guide to the Perplexed, the Eight Chapters and other writings.

18.09.02.31 Mysticism

A historical study of Jewish Mysticism from a theoretical and practical point of view.

18.09.02.32 Hassidic Theology

The growth and development of Hassidic Theological thought from the 16th Century to the present.

18.09.02.41 Modern Jewish Philosophy

A survey of modern religious philosophy.

18.09.02.42 Existentialist Thought

A study of contemporary existentialist theology with emphasis on the writings of Buber and Soloveitchik.

18.09.02.43 Holocaust Theology

A study of the theological implications of the Holocaust.

18.09.03 Jewish History

The study of the history of the Jewish people from Biblical times to the present.

18.09.03.01 Ancient Jewish History

A survey of the history of the Jewish people in ancient times.

18.09.03.11 Medieval Jewish History

A survey of the history of the Jewish people in medieval times.

18.09.03.21 Modern Jewish History

A survey of the history of the Jewish people in modern times.

18.09.03.31 Sects and Separatism

A comparative study of separatist movements through the ages.

18.09.03.32 Reform Judaism

An indepth study of the modern reform movement in Judaism in its variety of forms : Reform, Conservative and Reconstructionist in comparison to modern Orthodoxy.

18.09.03.33 Jewish Nationalism

A theological study of the centrality of Jerusalem and Israel in Judaism, with special reference to the Zionist Movement.

18.09.03.41 Social and Communal Organisation

A survey of organisational Judaism from Biblical times to the present.

18.09.03.42 Judaism and Civilization

A study of the Jewish contribution to civilization through the ages.

18.09.04 Practical Theology

A study of the ongoing living practices of Judaism.

18.09.04.01 Sabbath and Festivals

An indepth study of the laws and customs associated with the Sabbath and the Festivals.

18.09.04.11 The Jewish Home

The intensive study of the laws and customs associated with the home.

18.09.04.02 Family Purity

An intensive study of the laws and customs concerning the relationship between husband and wife.

18.09.04.21 The Synagogue

A historical and structural study of the Jewish house of worship with emphasis on the halachic dimension.

18.09.04.22 Worship and Liturgy

An analysis of the mode of Jewish worship and the development of prayer with emphasis on the halachic aspects thereof.

18.09.04.31 Man and his Neighbour

A survey of the laws and customs governing the relationship between man and man.

18.09.04.32 Ethics

A systematic analysis of the ethical principles of Judaism.

18.09 99 Other Judaism (Specify)

18.10 PRIMAL RELIGIONS

The study of the religions of tribal peoples in various parts of the world.

18.10.01 Phenomenology of Primal Religions

The study of human spirituality and outer forms of primal religions.

18.10.02 Anthropology of Primal Religions

The study of primal religions through the use of the theories and methods of anthropology.

18.10.03 Psychology of Primal Religions

The study of primal religions through the use of the theories and methods of psychology.

18.10.04 Sociology of Primal Religions

The study of primal religions through the use of the theories and methods of sociology.

18.10.05 Philosophy of Primal Religions

The study of primal religions in relation to the philosophical context in which they exist and in relation to the philosophical disposition on which they are based.

18.10.06 Primal Religions and Ethics

The study of the application of principles for individual and group behaviour in the traditional tribal societies.

18.10.07 Primal Religions and Culture

The study of the relationships between primal religions and culture.

18.10 99 Other Primal Religions (Specify)18.99 OTHER PHILOSOPHY, RELIGION AND THEOLOGY
(SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general or introductory element that already exists within the above structure.

19 PHYSICAL EDUCATION, HEALTH EDUCATION AND LEISURE

Subject matter concerned with the systematic investigation of physical education, kinesiology, sport, dance, health education, and leisure.

19.01 PHYSICAL EDUCATION

The study of education through a wide variety of physical activities involving interrelated components of kinesiology, sport, dance, and other physical activities basic to the development and conduct of programmes in physical education.

19.01 01 Movement Education

The study of the techniques of developing optimal motor movement and body awareness in individuals through the interrelated use of time, space, force, and effort.

19.01 02 Exercise

The study of principles and techniques that lead to a regular series of specific human movements designed to develop, maintain, or rehabilitate the body.

19.01 02 01 Training and Conditioning

The study of the principles and techniques that lead to a regular series of specific movements designed to bring the body to peak physical performance.

19.01 02 02 Developmental Exercise

The study of the principles and techniques that lead to a regular series of specific movements designed to enhance normal muscular development.

19.01 02 03 Therapeutic Exercise

The study of the principles and techniques that lead to a regular series of specific movements designed to enhance recovery from joint, bone, and muscular disease or injury.

19.01 02 04 Relaxation

The study of the principles and techniques that lead to a regular series of specific movements designed to produce a cathartic effect.

19.01 03 Group Games, Contests, and Self-testing Activities

The study and practice of the co-operative or competitive, self-evaluative skills of sports and games conducted on an individual or mass basis, including dodge ball, partner tag, tug of war, potato race, soccer dribble, volley ball service, basketball goals per minute, and softball throw for accuracy and for distance.

19.01 04 History of Physical Education

The study of the challenges, continuities, and changes that underlie significant events in the development of physical education, and the factors which have influenced that development.

19.01 05 Philosophy of Physical Education

The study of the fundamental nature and significance of physical education.

19.01 06 Physical Education Administration

The study of the theories and procedures of planning, organising, staffing, financing, directing, co-ordinating, evaluating, and reporting on the physical education programme.

19.01 07 Physical Education Curriculum

The study of the theories and techniques of selecting and ordering content, designing structure, and evaluating intended outcomes in physical education programmes.

19.01 08 Physical Education Instruction

The study of the principles and techniques of selecting, designing, and presenting instructional materials, and evaluating specific learning objectives in physical education.

19.01 09 Physical Education Supervision

The study of the principles and techniques designed to improve the professional development and performance of the teacher, and the results of the teaching-learning process.

19.01 10 Measurement and Evaluation in Physical Education

The study of the principles and techniques of collecting, analysing and interpreting data gained from each phase of the physical education programme, including curriculum processes, instructional objectives and procedures, and administrative and supervisory functions.

19.01 99 Other Physical Education (Specify)

19.02 KINESIOLOGY

The study of the biomechanical, anatomical, physiological, and psychomotor principles that are involved in human movement.

19.02 01 Biomechanics

The study of the structure and function of biological systems by means of mechanics, photographic observations, and electromyography.

19.02 02 Neuromuscular Anatomy

The study of the interrelated morphological characteristics of the muscular and nervous tissues and systems of the body.

19.02 03 Performance Physiology

The study of the changes in various mechanisms of the body that occur prior to, during, and following exercise, and the identification of the long-term effects of exercise as one engages in systematic physical training.

19.02 03 01 Neuromuscular Physiology

The study of the nervous and muscular processes responsible for the organisation and integration of muscular activities into meaningful and efficient movement patterns, and the effects of exercise, health, and aging.

19.02 03 02 Cardiorespiratory Physiology

The study of the cardiovascular and respiratory regulatory mechanisms responsible for the maintenance of chemical and physical equilibrium of human cells prior to, during, and following participation in sports and physical activity with emphasis given to understanding energy liberation and transfer, adaptations to extreme internal and external environmental conditions, and the effects of training, health, and aging.

19.02 04 Psychomotor Behaviour

The study of the principles and techniques of how an individual learns to move with control and efficiency through space.

19.02 04 01 Motor Learning

The study of the principles and techniques by which an individual acquires motor skills through practice.

19.02 04 02 Perceptual Motor Development

The study of the principles and techniques by which an individual integrates sensory response mechanisms to achieve movement relative to age, including space and time structure, and visual, auditory, and tactile senses.

19.02 05 Sports Medicine

The study of the scientific principles involved in understanding sport influences in the human organism, along with the specialised medical practices of care and supervision that are applied to the individual before, during, and after participation in sports and physical activity.

19.02 05 01 Sports Facilities and Equipment

The study of the animate and inanimate environmental factors important to the design, care, and maintenance of facilities and equipment for sports, games and contests to create safe, healthful, fair, and optimum environments for participants and spectators.

19.02 05 02 Sports Training

The study of the psycho-physiological principles for general physical training, specialised technical training, individualisation of training, and motivation and psychological preparation designed to bring the sportsman to peak condition for competition.

19.02 05 03 Diagnostic Procedures

The study of the principles and procedures of measurement and evaluation that are appropriate for the determination of health status and body development owing to age, sex, and state of general and special training.

19.02 05 04 Ergogenics

The study of the nature and effects of special aids to sportsmen that improve the capacity of the muscles to do work and to remove or reduce inhibitory mechanisms to physiological functions.

9.02 05 05 Exercise Prescriptions

The study of the type, frequency, intensity, and duration of physical training procedures that lead to optimal development of physiological processes and sports skills, with emphasis given to prevention or rehabilitation from degenerative processes.

9.02 05 06 Injury Prevention and Treatment

The study of the medical and physiotherapeutic bases for the recognition and management of sports injuries, including diagnostic procedures, first-aid and emergency care, definite medical care, and procedures of rehabilitation.

9.02 99 Other Kinesiology (Specify)9.03 SPORT

The study of the principles and techniques of developing, organising, and conducting activities that require vigorous bodily exertion and that are carried on according to some form or set of rules.

9.03 01 Sport in Schools and Post-secondary Education Institutions

The study of sport that is organised for student participation in educational settings.

9.03 01 01 Sports

The study of organised sports that are a part of competition between educational institutions.

9.03 01 02 Intramurals

The study of organised sports that are provided for all students within the confines of one institutional programme.

9.03 02 Sport in Community Agencies

The study of organised sports in which the individual or group participates outside the organisational structure of the educational institution.

9.03 03 Sport History

The study of significant events in the development of sport and the factors which have influenced that development.

19.03 04 Sport Sociology

The study of human society, organisations, and institutions as they relate to sport.

19.03 05 Sport Philosophy

The study of the fundamental nature and significance of sport.

19.03 06 Sport Psychology

The study of human behaviour in sporting activities.

19.03 07 International and Comparative Sport

The study and comparative analysis of sport in two or more countries or world regions with special emphasis on the influence of cross-cultural factors and development of systems and controls toward increased international understanding.

19.03 08 Administration of Sport

The study of the theories and procedures of planning, organising, staffing, financing, directing, co-ordinating, evaluating, and reporting on sports programmes.

19.03 09 Evaluation of Sport

The study of the theories and techniques used in collecting and interpreting data related to sport and sports programmes.

19.03 10 Supervision of Sport

The study of the principles, policies, and methods of improving the quality of sports programmes.

19.03 11 Instruction and Coaching of Sport

The study of the strategies and designs employed to create the opportunity for students to learn sports, and those theories, strategies, and designs employed to improve the performance of selected players or groups of players.

19.03 12 Sporting Activities

The study of the nature and performance of specific physical activities that are organised around rules, fields of play, and individual and group participation.

19.03 12 01 Aquatics

The study of the nature and performance of sporting activities that are performed in and around water.

19.03 12 02 Team Sport

The study of the nature and performance of competitive games involving rules and strategy, such as baseball, basketball, cricket, hockey, netball, rugby, soccer, softball, and volleyball.

19.03 12 03 Self-defence

The study of the nature and performance of selected physical activities related to defending oneself, such as karate and judo.

19.03 12 04 Individual Sports

The study of the nature and performance of individually performed sporting activities such as skiing, archery, and track and field events.

19.03 12 05 Dual Sports

The study of the nature and performance of sporting activities which require at least two competitors such as fencing, tennis, badminton, and quoits.

19.03 12 06 Adventure and Challenge Sports

The study of the nature and performance of activities which focus on challenge and the greater awareness of man and his environment, such as repelling, back-packing, orienteering, and wilderness and survival training.

19.03 12 07 Gymnastics

The study of the nature and performance of floor exercise and activities that require recognised apparatus such as the bars, beam, rings, and horse.

19.03 99 Other Sport (Specify)

19.04 DANCE

The study of the principles and techniques associated with performances involving the rhythmic movement of the feet and body, usually to the accompaniment of music.

19.04 01 Dance Choreography

The study of the principles and techniques of arranging bodily movements to create a dance.

19.04 02 Dance Notation

The study of the techniques of systematic recording, by sign or symbol, of the movements of a dancer or group of dancers in a particular dance form.

19.04 03 Dance Production

The study of the performance of dance and the setting in which dance is presented.

19.04 04 Dance Activities and Form

The study of rhythmic movement in time, force, and space.

19.04 05 Dance History

The study of significant events in the development of dance and the factors which have influenced that development.

19.04 06 Dance Philosophy

The study of beliefs, motives, and behaviour in dance.

19.04 99 Other Dance (Specify)

19.05 HEALTH EDUCATION

The study of activities and experiences which develop understandings, attitudes, and practices in promoting optimum physical, mental, and social health to enrich the quality of life for individuals and society.

19.05 01 Drugs and Other Substances

The study of physical, legal, psychological, and social effects upon individuals, families, and society at large of the use and abuse of drugs and other substances.

19.05 02 Community Health Education

The study of the availability and accessibility of health services and facilities, the function and service of these health agencies, and the prevailing health conditions in the community.

19.05 03 Consumer Health Education

The study of the relationship between the consumer and health agencies, including available services, sources of information, health advertising, quackery, and information leading to the use or rejection of products and services.

19.05 04 Disease Prevention and Control

The study of the nature of disease characteristics, cause, and prevention.

19.05 05 Environmental Health Education

The study of the effect upon man's health and well-being of such environmental factors as water supply, pollution control, food contamination, air pollution, radiation exposure, crowdedness, noise, and mobility.

19.05 06 Family Health Education

The study of family roles and responsibilities, types of families, family relationships and sexual behaviour, preparation for marriage, and family and parental responsibilities.

19.05 07 Mental Health Education

The study of human needs, feelings, and emotions and their effect upon behaviour.

19.05 08 Nutrition Education

The study of basic dietary requirements, food choices, and eating patterns, and their relationship to total body development and performance.

19.05 09 Personal Health Education

The study of the origin of living things, heredity, and structure and function of body parts, including growth and development, personal health practices, dental health, and grooming.

19.05 10 Physical Fitness

The study of physical activity factors that permit optimum development and maintenance of bodily functions and provide for general resistance against acute physical stresses, degenerative processes, emotional stress, and mental fatigue.

19.05 11 Safety Education

The study of experiences directed toward acquiring knowledge and behavioural patterns conducive to efficient and safe living, including traffic safety, civil defence and disaster preparedness, fire and water safety, home, school, and community safety, firearm safety, and recreational and industrial safety.

19.05 12 Sex Education

The study of the healthy development of human sexuality, sex roles, and sexual behaviour.

19.05 13 Administration of Health Education

The study of the theories and procedures of planning, organising, staffing, financing, co-ordinating, and evaluating a programme in health education.

19.05 14 Health Education Curriculum

The study of the theories and techniques for selecting and ordering of content, design of programme and evaluation of goals in health education.

19.05 15 Health Education Instruction

The study of the theories and techniques for selecting methods and materials, and evaluating specified learning objectives for programmes in health education.

19.05 16 Supervision in Health Education

The study of the principles, methods, and techniques of improving the professional development and performance of the teacher, and the results of the teaching-learning process in health education.

19.05 17 Measurement and Evaluation in Health Education

The study of the tests of achievement and attitude, and the critical analysis of data collected from each phase of the health education programme, including administrative functions, curriculum, processes, instructional objectives and procedures, and supervisory techniques.

19.05 99 Other Health Education (Specify)

19.06 DRIVER AND SAFETY EDUCATION

The study of the methods and techniques of developing the knowledge, skills, and judgement necessary for the safe operation of a motor vehicle.

19.06 01 Alcohol, Drugs, and Driving

The study of the effects of mind altering substances on the driving task.

19.06 02 Characteristics of Drivers

The study of the emotional, mental, and physical characteristics of the driver and the effects of those characteristics upon driving.

19.06 03 Development of Driving Judgement

The study of the relationship of vision and perception, knowledge, and physical laws, and their application to formulating judgement and decision making in traffic situations.

19.06 04 Behind-the-Wheel Driving Skills

The study of the basic skills involved in starting and stopping, turning, executing special manoeuvres, and driving under hazardous conditions that involve expressways, parking, open-highway driving, and emergency situations.

19.06 05 Motor Bikes and Bicycles

The study of the basic safety factors involved in the operation of a bicycle, motorcycle, or motor scooter, including information about vehicle selection, maintenance and care, and safe driving.

19.06 06 Motor Vehicles and Engineering

The study of automotive mechanics, the economics of vehicle ownership, trip planning, and the functions and responsibilities of the automotive engineer, highway engineer, and traffic engineer.

19.06 07 Simulation Driving Experience

The study of basic driving skills through the use of electromechanical devices which simulate the actual driving experience and assist in developing perceptual and judgemental proficiencies.

19.06 08 Student Patrol

The study of the activities and experiences concerned with the organization, supervision, structure, and functions of various school patrols, including traffic, hall or school, school bus, playground, fire drill, and civil defence.

19.06 09 Traffic Accidents

The study of literature and films concerned with the human factors, socio-economic conditions, and road and vehicle conditions as they relate to traffic accidents.

19.06 10 Traffic Citizenship

The study of the driver's responsibility to other drivers and highway users, to himself, to the community, and to the support of public officials.

19.06 10 01 Passenger Safety

The study of the responsibilities and obligations of the passenger relative to safety when travelling by passenger car or taxi, school bus, public conveyance, train, boat, and aeroplane.

19.06 10 02 Pedestrian Safety

The study of safe pedestrian practices in traffic, on rural roads and in cities, proper crossing procedures, and obeying traffic signs and signals, including instruction about situations where there are no pavements, wearing proper clothing, proper routes to and from school, and obeying scholar safety patrols.

19.06 11 Traffic Laws, Ordinances and Regulations

The study of traffic law, ordinances and regulations, and their enforcement.

19.06 99 Other Driver and Safety Education (Specify)

19.07 LEISURE STUDIES

The study of the challenges, opportunities, and problems of leisure and its effect on the lives of individuals and the social fabric of local, national, and world communities, including the preparation for living in a leisure-centred society.

19.07 01 Resource Management in Leisure Studies

The study of the principles, methods, and techniques of utilising economic, natural, and structural resources in the leisure field, including the effective and efficient development, control, regulation and direction of finances, facilities, and land.

19.07 02 Populations and Leisure Services

The study of methods of identifying and satisfying leisure needs of identifiable special population groups including industrial, armed forces children, aged, disabled or handicapped, or special geographic area populations.

19.07 03 Leisure and Recreation Planning

The study of the principles, methods, and techniques of assessing, forecasting, developing, and evaluating plans for recreation.

19.07 04 Leadership in Leisure Studies

The study of principles, methods, and techniques of planning, conducting, supervising, and evaluating programmes in the leisure field.

19.07 05 Recreation Activities

The study of human participation in those activities indulged in by a participant, voluntarily, in his free time for the sake of participation and the satisfaction derived from it.

19.07 05 01 Arts and Crafts

The study of the development of skills related to tastes, interests, arts, and refinements in recreational pursuits.

19.07 05 02 Dramatics

The study of activities in recreation designed to be imitative or creative in nature, with or without the use of music, and related to the tastes, interests, arts, and refinements of the participants.

19.07 05 03 Recreational Sports and Physical Activities

The study and development of understanding, appreciation, and skills related to the participation and enjoyment in sports and physical activities in one's leisure.

19.07 06 History of Leisure Studies

The study of the challenges, continuities, and changes underlying significant events in the development of leisure, and the factors that have influenced development of the field.

19.07 07 Philosophy of Leisure Studies

The study of the fundamental nature, principles, and significance of leisure and recreation.

19.07 08 Sociology of Leisure Studies

The study of the nature of human society, organisations, and institutions as these relate to leisure.

19.07 09 International and Comparative Leisure Studies

The study and comparative analysis of leisure and recreation in two or more countries or world regions with special emphasis on the influence of cross-cultural factors, and the development of systems and controls for increased international understanding.

19.07 99 Other Leisure Studies (Specify)

19.99 OTHER PHYSICAL EDUCATION, HEALTH EDUCATION, AND LEISURE (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

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III-20-01

20 PSYCHOLOGY

Subject matter which is concerned with the behaviour and experience of the individual organism and which applies its findings in service of the individual, industry, and government.

20.01 FOUNDATIONS OF PSYCHOLOGY

The study of the body of knowledge and theory shared by all psychologists, working in any of several specific subject-matter areas.

20.01 01 Ethical Principles of Psychology

The study of general and professional ethical problems encountered in practice by research, clinical, and other psychologists.

20.01 02 Historical Perspectives of Psychology

The study of the progressive development of psychological knowledge and theory from classical times to the present, including the development of scientific psychology through the last century, and of the application of that knowledge to individual and social betterment.

20.01 03 Systems of Psychology

The study of major recent and current general views of psychology and the nature of humans, including such systems as functionalism, structuralism, Gestalt psychology, behaviourism, psychoanalysis, humanistic psychology, phenomenological psychology, radical empiricism, ethology, and systems theory.

21.01 04 Theories in Psychology

The study of the methodology of psychological theorising, including review of specific theories that have been developed to account for diverse specific behavioural phenomena with possible broader applications.

20.01 99 Other Foundations in Psychology (Specify)

20.02 BIOPSYCHOLOGY

The study of the biological basis of the behaviour of the individual, including evolutionary, genetic, biochemical, and physiological considerations.

20.02 01 Behavioural Genetics

The study of the principles of genetics and genetic research applied to the behaviour of the individual organism, including the identification and selection of heritable traits.

20.02 02 Comparative Psychology: Evolution of Behaviour

The study of the behaviour of members of particular species, and the relationship of the behaviour of the species to its evolutionary origins.

20.02 03 Biochemistry of Behaviour

The study of the biochemical basis of behaviour; and the role of hormones and other chemical substances in behaviour, including brain chemistry.

20.02 03 01 Psychopharmacology

The study of changes in behaviour that occur as a function of drug injection, and the psychological processes associated with such changes, including altered states of consciousness and addiction.

20.02 04 Physiological Psychology

The study of the physiology of the individual with respect to the functioning of physiological systems in the behaviour of the individual organism.

20.02 04 01 Neuropsychology

The study of the nervous system, especially the central nervous system, as it participates in or determines behaviour, including relevant studies of neuroanatomy and neurophysiology.

20.02 04 02 Sensory Psychophysiology

The study of physiology of the special sense organs and the associated tracts and centres of the nervous system as they relate to sensory processes and perception.

20.02 04 03 Psychophysiology and Biofeedback

The study of the electrical and mechanical activities of the respiratory and circulatory systems, of skeletal musculature, and of the nervous system as they affect individual behaviour, including biofeedback and self-control of cortical and other activities.

20.02 99 Other Biopsychology (Specify)

20.03 ENVIRONMENTAL PSYCHOLOGY

The study of natural and man-made environments as spaces in which the individual behaves; activities and processes that occur in them and that are encouraged or discouraged by them; and the choice, design, and evaluation of environments to increase or decrease the likelihood of particular actions.

20.03 01 Ecological Psychology

The study of the interaction between individuals and groups, and the physical environment.

20.03 02 Architectural Psychology

The study of behaviour as a function of the design and construction of man-made spaces and the behavioural laws that enable the architect to plan for the most effective and acceptable use of structures.

20.03 03 Spatial Behaviour

The study of behaviour as a function of the location about an individual, of other persons, of objects, and of the topography of the individual's physical environment.

20.03 99 Other Environmental Psychology (Specify)

20.04 EXPERIMENTAL PSYCHOLOGY

The study of the general body of methods, data, and laws that has been derived by scientific research, including theoretical and systematic points of view applicable to the prediction, control, and understanding of the behaviour of individual human organisms and other species.

20.04 01 Behaviour Analysis

The study of the experimental methodology and its findings derived from reinforcement-oriented analysis of both the environment and of the individual's activities.

20.04 02 Experimental Methodology and Design

The study of the planning and executing of an experiment, including the selection of subjects, the order of administration of the experimental treatment, the kind of treatment and the procedures by which it is administered, and the recording of the data.

20.04 03 History of Psychological Experimentation

The study of the history of psychological experimentation.

20.04 99 Other Experimental Psychology (Specify)

20.05 PSYCHOLOGY APPLIED TO HEALTH

The study of the principles and practices that are utilised in the creation and provision of psychological programmes that are established to promote the mental health of individuals, groups or communities.

20.05 01 Clinical Psychology

The study of the development of programmes for training clinical psychologists, and basic considerations, theory, and practice entering into the methods and theories selected from psychology and other fields as they relate to dealing with the troubled individual. The study includes all methods of assessment and of behaviour change, as well as of family or community intervention.

20.05 01 01 Behaviour Modification

The study of the theory and methods of modifying undesired behaviours that are derived from the facts of both classical and operant conditioning, including desensitisation, implosion, contingency management, and token economies.

20.05 01 02 Crisis Intervention

The study of the application of psychological theories and methods in treating individuals during periods of extreme emotional distress.

20.05 01 03 Assessment

The study of the theories and methods of evaluating an individual's behaviour, including interviewing procedures, administration and interpretation of standardised tests, and field work methodology.

20.05 01 04 Psychotherapeutic Methods

The study of the consideration of the methods differentially applicable to children and adults that can be pursued to resolve a problem, modify or minimise, or eliminate an undesired or intolerable behaviour.

20.05 02 Counselling Psychology

The study of the development of programmes for training counselling psychologists, including the theory and practice of systematically selecting the facts and theories of psychology with the intent of advising individuals on making their way in society.

20.05 02 01 Child Guidance

The study of the guidance of children with behaviour problems and incipient mental illness.

20.05 02 02 Vocational Counselling

The study of the guidance of persons to find and select the opportunities and activities that will yield maximum satisfaction and profit in their life work.

20.05 02 03 Career Development

The study of occupations, the means for preparing for them, and the techniques for obtaining employment.

20.05 02 04 Marriage Counselling

The study of the counselling relationship in which a marriage counsellor endeavours to help marriage partners to understand and to solve their adjustment problems in marriage.

20.05 02 05 Pastoral Counselling

The study of the counselling relationship in which a pastoral psychologist endeavours to help another person to understand and to solve his or her religious problems.

20.05 02 06 Thanatology

The study of the counselling of the terminally ill, their families, and associates.

20.05 03 Community Psychology

The study of programmes for the training of community psychologists, including the theory and practice of using psychologists, psychological fact, practice, and theory in psychological work not in the academic, school, and clinical contexts, but rather in the broader social community, working with private and public organisations.

20.05 04 Mental Health Consultation

The study of the role and function of the psychologist as a mental health consultant responding to the needs of diverse individuals and groups in a variety of settings.

20.05 05 Behavioural Medicine

The study of the application of psychological methods to problems that have been traditionally considered to be in the domain of medicine, with the aim to improve or prevent these problems.

20.05 05 01 Psychopathology

The study of the description, classification, and theory of unusual behaviours that are considered abnormal.

20.05 99 Other Psychology applied to Health (Specify)

20.06 PSYCHOLOGY APPLIED TO EDUCATION

The study of the principles and practices that are utilised in the creation and provision of psychological programmes that are established to promote optimal conditions for learning.

20.06 01 Educational Psychology

The study, selection, and application of methods, facts, and theories of psychology that relate to individual learning in formal courses of instruction.

20.06 02 School Psychology

The study of the development of courses of training for school psychologists, and the selection of facts and theories relevant to working with the behaviour of the individual child in the context of the school and other community organisations within which the child functions, including child-school, child-family, and child-community interactions. The study includes the identification and amelioration of individual behaviours and the identification and analysis of individuals and agencies to which the schoolchild may look for assistance.

20.06 02 01 Academic Remediation

The study of the relationship of psychological factors to learning problems and the techniques of clinical remedial correction.

20.06 02 02 Behaviour Management

The study of the application of psychological principles to the analysis of student behaviour problems and the techniques for treating and ameliorating such behaviour problems.

20.06 99 Other Psychology applied to Education (Specify)

20.07 PSYCHOLOGY APPLIED TO INDUSTRY, GOVERNMENT AND OTHER ORGANISATIONS

The study of the principles of selection, placement, training, motivation, and evaluation of individuals for work in industrial, government or other settings, and the application of psychological knowledge and methodology to specific work related problems.

20.07 01 Industrial Psychology

The study of the use and outcomes of psychological methodology in industry.

20.07 02 Personnel Psychology

The study of the process of selection, management, and motivation of individuals for specific responsibilities in industrial and other organisations.

20.07 03 Military Psychology

The study of the processes of selection, production, and application of psychological knowledge specifically related to the duties, organisations, and equipment of military personnel.

20.07 04 Organisational Psychology

The study of the behaviours of individuals and groups as they determine the design and effectiveness of social, governmental, or military organisations, and are determined by them.

20.07 05 Consumer Psychology

The study of the individual's choice of a course of action in the purchasing and use of goods and services, including the role of advertising.

20.07 06 Human Engineering

The study of the behaviour of individuals, and the behavioural processes that must be considered in the design and function of organisations or equipment used in those organisations.

20.07 06 01 Man-machine Systems

The study of the application of psychological principles and knowledge to the harmonious co-ordination of human resources and machine systems.

20.07 06 02 Work Environments

The study of the application of psychological principles and knowledge to the creation of work environments which result in increased employee satisfaction, productivity, and profitability.

20.07 06 03 Work Performance

The study of the application of psychological principles and knowledge to the development of training programmes, performance standards, incentive plans, and evaluation procedures.

20.07 07 Programme Evaluation

The study of the description and assessment of the performance of individuals in the design and execution of a programme or project.

20.07 99 Other Psychology applied to Industry, Government and other organisations (Specify)

20.08 PSYCHOMETRICS

The study of the mathematical and statistical procedures used in psychological test construction and validation, and of the general problems of the measurement of behaviour.

20.08 01 Differential Psychology

The study of the use of test scores of an individual defined as a member of some specific reference group, and of psychological characteristics of occupational and other sets of people.

20.08 02 Psychological Assessment

The study of the theory and practice of selecting and using batteries of psychological tests of an individual for the purpose of classifying, diagnosing, or predicting later behaviour.

20.08 03 Psychological Testing

The study of psychological tests, their administration and results, including intelligence tests and various tests of personality.

20.08 03 01 Mental Test Theory

The study of the theory of mental tests, test construction, standardisation and validation.

20.08 04 Factor Analysis

The study of the methods of factor analysis and related techniques.

20.08 05 Psychological Scaling

The study of theory and methods of psychological scaling, both uni-dimensional and multi-dimensional.

20.08 06 Psychological Statistics

The study of parametric and non-parametric statistics as applied to psychology.

20.08 07 Survey Techniques

The study of the theory and procedures for constructing or selecting appropriate survey instruments for retrieving psychological data on individuals or groups.

20.08 99 Other Psychometrics (Specify)

20.09 SOCIAL PSYCHOLOGY

The study of the behaviour of the individual as a member of a group, and of the processes of associating individuals together.

20.09 01 Attitudes

The study of the complex concept referring to the individual's reactions toward some social object, event, or state of affairs.

20.09 02 Group Processes

The study of the classification of groups on the basis of the behaviour of their members, including the behaviour of individuals within such groups as it determines and is determined by, the behaviour of other members of a group.

20.09 03 Organisational Psychology

The study of the behaviour of individuals and of groups as it determines the design and effectiveness of social, governmental, or military organisations, and is determined by them.

20.09 04 Psychology of Communication

The study of relations between persons who select messages (sources), and persons who interpret and are affected by them (destinations); the study of mass media communication and their effects on mass audiences, other cultures, etc.

20.09 05 Psycholinguistics

The study of the psychology of language, including the behavioural processes that enter into the generation of speech and writing, and the understanding of both spoken and written languages.

20.09 06 Motivation

The study of the processes that determine what actions will occur at a particular time, and the strength or precision with which those actions will occur.

20.09 07 Psychology of Identifiable Groups

The study of facts and therapeutic methods related to individuals who are women, members of ethnic groups, and of groups asserting identifiable "life styles".

20.09 08 Psychology of Culturally Disadvantaged Persons

The study of facts and therapeutic methods related to individuals who are culturally disadvantaged.

20.09 99 Other Social Psychology (Specify)

20.10 DEVELOPMENTAL PSYCHOLOGY

The study of progressive changes in the behavioural processes of individuals as a function of aging through the life span, from conception to death.

20.10 01 Psychology of Age Groupings (Child, Adult, Aged)

The study of infant psychology, child psychology, adolescent behaviour, psychology of mature or adult individuals, and of the elderly, with consideration and study given to age-associated psychological status and problems of individuals falling into particular age classifications.

20.10 02 Exceptional Development

The study of the personality development and behaviour patterns of individuals with emotional, mental, and physical disabilities.

20.10 03 Psychology of Personality

The study of the unique organisation of the fairly permanent characteristics that set the individual apart from other individuals and, at the same time, determine how others respond to that person.

20.10 04 Psychology of Death

The study of the behaviour of the terminally ill, of their families, and their associates, including suicide and grief.

20.10 99 Other Developmental Psychology (Specify)20.11 COGNITIVE PSYCHOLOGY

The study of perceiving, recognising, conceiving, judging, and reasoning by humans and other species.

20.11 01 Decision Making

The study of the processes that determine the behaviour of the individual organism when specifically confronted with the need to choose, including conflict and the resolution of conflict.

20.11 02 Human Information Processing

The study and interpretation of human behaviour based on the application of methods and theories derived from computer analogies.

20.11 03 Psychology of Learning

The study of the acquisition and recall of new behaviour patterns, and of the processes of learning new activities, and of retaining them through time.

20.11 03 01 Learning, Conditioning

The study of the modification of a response, following upon and resulting from experience or repeated stimulus.

20.11 03 02 Retention and Recall

The study of the ability to recall material previously learned.

20.11 03 03 Programmed Learning, PSI (Planned Sequential Instruction)

The study of the methods of presenting materials to be learned in carefully planned sequences, often with the aid of a teaching machine.

20.11 04 Psychology of Sensory Processes and Perception

The study of the sensory systems of vision, hearing, touch, taste, and smell, and their characteristics; the discrimination of objects and events; and the behavioural organisation of the physical environment and its measurement.

20.11 05 Psychology of Thinking and Problem Solving

The study of ongoing behaviour patterns of individuals that seem independent of the immediate environment and the utilisation of behaviour patterns acquired in other contexts to immediate problems.

20.11 99 Other Cognitive Psychology (Specify)

20.99 OTHER PSYCHOLOGY (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

21 PUBLIC ADMINISTRATION AND SOCIAL SERVICES

Subject matter concerned with the formulation, implementation, administration, and evaluation of public policies, programmes, and services, including those services which are directed toward the betterment of economic and social conditions.

21.01 PUBLIC ADMINISTRATION

The study of the knowledge, skills, values, and behaviour involved in the formulation of public policies and the administration of public services.

21.01 01 Administrative Theory

The study of the principles and theories of the process of orderly providing for public needs.

21.01 02 Organisational Theory and Behaviour

The study of the theories and principles governing the behaviour of individuals and groups in complex organisations serving public needs.

21.01 03 Administrative Functions

The study of the principles and techniques of planning, organising, and controlling public policies, programmes, and services.

21.01 03 01 Administration of Public Buildings and Lands

The study of the principles and techniques of the administration of public buildings, and other facilities and stores in the process of providing for public needs.

21.01 03 02 Personnel and Labour Relations in Government

The study and application of the principles and theories of recruiting, training, placing, and separating persons in public service, and of negotiating conditions of employment with representatives of public employees.

21.01 03 03 Financial Administration

The study of the principles and theories of the administration of public funds in the process of providing for public needs.

21.01 03 04 Information Systems

The study of the economic, political, and social significance and relationship of contemporary communication and information technologies to public administration.

21.01 04 Regulatory Administration

The study of the political and administrative aspects of governmental regulation of industry in the public interest.

21.01 05 Comparative Public Administration

The study and comparative analysis of public administration in two or more countries or regions, with special emphasis on public policies, procedures, and institutions.

21.01 06 International Administration

The study of the principles and theories underlying the structure and processes of major international organisations, such as the United Nations or various regional organisations.

21.01 07 Legislative Administration

The study of the impact of the administration of legislative bodies on, and its relationship with, public policy and administration.

21.01 08 Court Administration

The study of the impact of the administration of the court system on, and its relationship with, public policy and administration.

21.01 09 Professional Practices in Public Administration

The study of the activities, attitudes, and responsibilities that characterise officials serving in a public capacity.

21.01 10 Public Policy and Science and Technology

The study of the role of government in the development of scientific and technological policies, the organisation and management of scientific research, and in technological applications.

21.01 11 Public Policy and Natural Resources and Environment

The study of the role of the government in the development, regulation, and use of natural resources, and in the improvement and protection of the environment.

21.01 12 Policy Sciences

The study of social, economic, and political factors that impinge upon or clash with the decision-making process of legislative, executive, and other governmental agencies that formulate or influence public policy.

21.01 13 Public Policy Analysis and Evaluation

The study of the principles and techniques by which systematic judgement and evaluative assessments are made with respect to particular public policy.

21.01 14 Quantitative and Non-quantitative Analysis

The study of the principles and techniques of applying statistical and non-statistical analysis to the problems of public policy, programmes, and services.

21.01 99 Other Public Administration (Specify)

21.02 PUBLIC WORKS

The study of the role of the government in constructing, maintaining, and providing structures and utilities for use by the general public.

21.02 01 Public Transportation

The study of the theory, techniques, planning, and development of facilities and systems for transporting people and goods.

21.02 01 01 Public Mass Transit

The study of the theory, techniques, planning, and development of providing conveyance or transportation for large numbers of persons or large quantities of goods by means of facilities above and below ground level.

21.02 01 02 Public Streets and Highways

The study of the theory, techniques, planning, and development of constructing and maintaining transportation routes for the general public.

21.02 01 03 Public Ports, Harbours, and Terminals

The study of the theory, techniques, planning, and development of transportation points and facilities for passenger and freight, to serve the needs of the general public.

21.02 02 Public Sanitation

The study of the theory, techniques, planning, and development of provisions for the maintenance of the health and welfare of the general public.

21.02 03 Administration of Public Facilities and Buildings

The study of the theory, techniques, planning, and development of the services required for the efficient operation and administration of public facilities and buildings.

21.02 04 Public Utilities

The study of the theory, techniques, planning, and development of services such as electricity, waste removal, water, power, and transportation, which are owned and operated, or regulated by governmental agencies, on behalf of the general public.

21.02 99 Other Public Works (Specify)

21.03 SAFETY AND CORRECTIONAL SERVICES

The study of the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions and rehabilitative services.

21.03 01 Correctional Services

The study of the theory, principles, and techniques used in incarceration, behaviour modification, rehabilitation, and returning of offenders against the law to society.

21.03 01 01 Organisation and Administration of Correctional Services

The study of the theory and practices of structuring, administering, directing, and controlling agencies and organisations whose purpose it is to provide safety and correctional services.

21.03 01 02 Correctional Techniques and Procedures

The study of the techniques and procedures used in working with criminals in the process of rehabilitation, adjustment, and re-entry into society.

21.03 01 03 Parole and Probation

The study of the principles and procedures for the gradual re-integration of the criminal from the institution into society.

21.03 01 04 Penology

The study of the punishment phenomenon which includes the fundamental aspects of punishment, penitentiary and community based corrections, and judicial facets of sentencing and punishment.

21.03 02 Fire Protection

The study of the principles and techniques of fire prevention, fire fighting, and rescue.

21.03 03 Industrial and Occupational Safety Services

The study of the principles and techniques of maintaining safe work environments in business and industry.

21.03 04 Law Enforcement

The study of the theories, principles, and techniques of administering and maintaining the safety and protection of people and property.

21.03 04 01 Criminal Investigation and Evidence

The study of the techniques and procedures for collecting information to be used in the investigation, apprehension, and conviction of offenders against the law.

21.03 04 02 Law Enforcement Technology

The study of the techniques and procedures for utilising the equipment, arms, and investigative devices that are used in law enforcement.

21.03 04 03 Organisation and Administration of Law Enforcement

The study of the theory and practices of structuring, administering, directing, and controlling agencies whose purpose it is to ensure law enforcement.

21.03 04 04 Police Administration

The study of the principles and techniques of controlling, directing, and administration of a police force and its equipment.

21.03 04 05 Police Problems

The study of the issues and problems of police officers in general, and of their relationship with the public they serve.

21.03 04 06 Police Procedures and Tactics

The study of the various procedures and tactics used in criminal apprehensions, daily routines, and other law enforcement activities.

21.03 05 Protective Services

The study of the principles and techniques for protecting persons and property by private and public law enforcement bodies.

21.03 99 Other Safety and Correctional Services (Specify)

21.04 SOCIAL WORK

The study of the form of social intervention which enhances, conserves, and augments the means by which persons, individually or collectively, can solve disruptions in their social existence.

21.04 01 Social Welfare

The study of the various services provided by a government or its agencies for the benefit of its citizens.

21.04 01 01 History of Social Welfare

The study of the changes over time that underlie significant events in the development of social welfare, including a time-related concern with the state, development, and programmatic and organisational expressions of social policy and philosophy.

21.04 01 02 Philosophy of Social Welfare

The study of the ideas, rational arguments, and positions concerning the provision by government and private agencies of conditions and services promoting the social, economic, civil, physical, and psychological well-being of people.

21.04 01 03 Organisation of Social Welfare Services

The study of the social, administrative, and organisational structures developed to implement social welfare, philosophy, and policy, such as the social security system and governmental and private welfare services.

21.04 01 04 Social Welfare Policy Formulation

The study of the descriptive, theoretical, and methodological approaches to the development of social welfare policy, including the application of values and data to policy formulation.

21.04 02 Social Work Practice

The study of organised practices and procedures that are directed toward the betterment of social conditions in the community by seeking to improve the condition of the disadvantaged and promote the welfare of specific age groups.

21.04 02 01 History and Philosophy of Social Work

The study of the development over time of the efforts and results of attempts to establish and maintain social work as a profession, including emphasis on the historical aspects of its organisational efforts in practice and education.

21.04 02 02 Organisation and Administration of Social Work

The study of the operation of social work organisations, including policy development and implementation at the agency level, personnel practices, budgeting, planning, fund raising, community and inter-agency relations, and staff development.

21.04 02 03 Social Work Research and Evaluation

The study of the methods and strategies of conducting research and building knowledge about social work by the practitioner, or by someone other than the practitioner, for the purpose of evaluating programme impact.

21.04 02 04 Professional Practices in Social Work

The study of the belief system, code of ethics and standards of professional behaviour, working conditions, and salaries of social work practitioners.

21.04 02 05 Public and Private Social Work Practice

The study of the principles and practices involved in the rendering of social services as part of a governmental administrative and service agency, or as provided in private practice, including codes of ethics and standards of professional behaviour.

21.04 02 06 Social Work and Other Subject Matter

The study of the knowledge of social work as it is integrated with the substance of other subject matter, such as psychology, sociology, economics, political science, law, or medicine, and as other disciplines are modified for application to the practice of social work.

21.04 03 Social Work Methods

The study of the principles, methods, and techniques by which social work is carried on.

21.04 03 01 Social Case Work

The study of the theory and techniques of working alone with individuals or within the context of families or significant persons.

21.04 03 02 Social Group Work

The study of the theory and techniques of working with small formal or informal groups.

21.04 03 03 Community Organisation and Development

The study of the theory and techniques of organising and co-ordinating a network of social services in a community, including community planning, helping people solve community problems, or developing communities through the efforts of its citizens.

21.04 03 04 Prevention of Social Problems

The study of the theory and techniques involved in the practice of preventing foreseeable social problems and promoting desired social goals.

21.04 03 05 Social Work Consultation

The study of the theory, techniques, and practice of giving consultation to peers, other disciplines, or administrative and public representatives, as well as receiving such consultation from them.

21.04 03 06 Social Work Supervision

The study of the theory, techniques, and practice of social work supervision, including its educational and administrative components.

21.04 04 Fields of Social Work

The study of specific and identifiable social problems, populations at risk, institutions, and geographical locales of social service rendering.

21.04 04 01 Social Work of Age Groupings

The study of social problems and their remediation that relate specifically to individuals falling into particular age classifications, such as child, youth, adolescent, adult, or aged.

21.04 04 02 Social Work of Identifiable Sets of People

The study of social problems and their remediation that relate specifically to individuals who may be women, or members of ethnic groups, or who assert identifiable life-styles.

21.04 04 03 Social Work of Social Environments

The study of social problems and their remediation that relate specifically to particular social environments, such as schools, correctional institutions, business and industry, housing, and urban, rural, or international settings.

21.04 04 04 Social Work in Occupational Settings

The study of social problems and their remediation that relate specifically to particular occupational settings, such as factories, offices, outdoor sites, remote assignments, and to particular types of management-conditions such as migrant labour.

21.04 04 05 Social Work and Health Care

The study of social problems, and their remediation that relate specifically to health conditions, such as mental health and mental retardation, physical health, chemical dependency, and others that generally occur in health care settings.

21.04 04 06 Multiple Fields of Social Work

The study of social problems and their remediation that relate to combinations of one or more social settings, social environments, groups of various ages, or identifiable sets of persons.

21.04 05 Social Environments and Human Behaviour

The study of the relationships between various social settings and the body of knowledge that centres on the physical and mental development of human beings, and the impact of those relationships on the field of social work.

21.04 05 01 Human Development

The study of the description and theoretical explanation of normal human development and the factors conducive to that normal development.

21.04 05 02 Deviant Behaviour

The study of the description and theoretical explanation of non-normal development and the factors responsible for such development.

21.04 05 03 Family Dynamics and Relationships

The study of the family as a social entity, including the psychological aspects of intra-family interactions.

21.04 05 04 Social Impact of Institutions

The study of the impact of societal organizations and institutions on human psychological states and social functioning, including schools, prisons, hospitals, and public welfare agencies.

21.04 05 05 Physical and Mental Illness

The study of the social-psychological causes of physical and mental illness in which description and explanation are stressed rather than practised.

21.04 05 06 Social Impact of Environments

The study of the combinations of social, cultural, economic, sexual, racial, geographical, genetic, and community factors with environmental complexes and their impact on the development and functioning of people.

21.04 05 07 Social Problems

The study of all populations at risk and their needs, including the mentally retarded, the aged, the mentally and physically ill and disabled, children born out of wedlock, the chemically dependent, and the economically and socially disadvantaged.

21.04 99 Other Social Work (Specify)

21.05 PUBLIC RECREATION

The study of the principles and procedures of providing recreational facilities and services for the benefit of the general public.

21.05 01 Recreational Environments

The study of the principles and procedures for designating and for maintaining the quality and use of public areas in which recreational activities take place.

21.05 02 Community Recreation

The study of the principles and procedures of implementing recreational activities to serve the expressed needs of a community.

21.05 03 Public Recreation Administration

The study of the principles and procedures of planning, organising, staffing, financing, directing, co-ordinating, evaluating, and reporting on public recreational programmes.

21.05 99 Other Public Recreation (Specify)

21.99 OTHER PUBLIC ADMINISTRATION AND SOCIAL SERVICES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

22 SOCIAL SCIENCES AND SOCIAL STUDIES

Subject matter concerned with behaviour, past and present activities, interactions, and organisations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes, and the procedures of social inquiry that have been selected and adopted for use in instructional situations.

22.01 ANTHROPOLOGY

The study of the origins, physical and cultural development, shared customs and beliefs of historic and prehistoric human populations.

22.01 01 Archaeology

The study of man's past through the analysis of physical remains.

22.01 01 01 Experimental Archaeology

The study of man's past by the reconstruction of past physical remains under laboratory conditions.

22.01 01 02 Industrial Archaeology

The study of the development of organised manufacture from pre-historic times to the present through the analysis of physical remains.

22.01 01 03 Processual Archaeology

The attempt to explain the past changes in man's culture by a synthesis of evolutionary theory, past and present human ecology and systems theory, including environmental archaeology (i.e. the study of past environments and their influence with the specific purpose of explaining man's past), and ethno-archaeology (i.e. the study of living non-literate peoples with the specific purpose of explaining man's past).

22.01 02 Cultural Anthropology

The general comparative study of man's societies and cultures, with emphasis on learned and shared behaviour patterns.

22.01 02 01 Anthropological Linguistics

The study of topics such as the evolution of language in relation to animal communication; the development of writing; language universals and classification; the relation of language to world view and other components of culture; the significance of language in connection with relations between people.

22.01 02 02 Bio-Social Anthropology

The attempt to trace the roots of human social behaviour in the social life of anthropoid and other non-human societies, including the study of these species and the distinguishing characteristics of human social and cultural life.

22.01 02 03 Ethnography

The descriptive study of particular communities, societies and their cultures.

22.01 02 04 Ethnology

The historical study of races and cultures of non-literate peoples, the classification and distribution of cultures and ethno-history or the comparative study of cultures with a view to formulating generalisations about culture.

22.01 02 05 Psychological Anthropology

The study of the effect of cultural moulding on personality, the enculturation or socialisation process, attitudes and symbolic interaction.

22.01 02 06 Regional Ethnography

The descriptive study of societies and cultures in specific regions e.g. Arctic, North and South America, Africa, Asia, Australia, the Middle-East, Melanesia, Polynesia and New Guinea.

22.01 02 07 Research Methodology

The study of the principles and techniques of identifying areas of inquiry, formulating concepts and hypotheses, developing the logic of experimental design and sampling, constructing indices, scales and typologies, conducting field work and laboratory analysis, and analysing and interpreting data in anthropological studies.

22.01 02 08 Social Anthropology

The comparative study of the nature of social systems, including kinship and marriage, economies, politics, religion and cognitive systems, and the study of cultural and social change.

22.01 02 09 Technology

The study of material culture, its invention, development, function and distribution, often in connection with historical study.

22.01 02 10 The Anthropology of Complex Societies

The application of anthropological methods and theories in the study of Western and other complex societies, including the study of urban communities and phenomena such as urbanisation, industrialisation, ethnicity and migrant labour.

22.01 02 11 The Anthropology of Peasant Communities

The application of anthropological methods and theories in the study of peasant communities in Meso-America, Europe, South America, the Middle-East and elsewhere.

22.01 02 12 Topical Anthropology

The study of a variety of issues, problems and topics in the various branches of anthropology.

22.01 03 Physical Anthropology

The study of the biological characteristics of Homo sapiens as a being producing culture.

22.01 03 01 Human Biological Parameters

The study of the range of human physical variations, including genetics and inheritance and the use of genetic markers in establishing the character of human populations.

22.01 03 02 Palaeo-anthropology

The study of the evolution of human physical characteristics, including mammalian and primate evolution, the fossil record, the evolution of the brain and the origin of the main races and sub-populations.

22.01 99 Other Anthropology (Specify)

22.02 ECONOMICS

The study of the utilisation of limited resources in order to satisfy man's unlimited needs.

22.02 01 Theory of Economics

The study of the theories, principles, and methods of economics.

22.02 01 01 Macro-economic Theory

The study of economic theories and statistical analyses that deal with aggregates or groups of individuals, firms or commodities; for example, total income, total consumption, total production, total employment, etc.

22.02 01 02 Micro-economic Theory

The study of economic theories and statistical analyses that deal with the economic activities of small units; for example, the individual person, individual firm, demand (supply) for individual commodities, etc.

22.02 02 History of Economic Thought

The study of the development of macro- and micro-economic theory from the past to the present day.

22.02 03 Economic Policy

The study of the creation, development, and application of economic policy originating in the private or public sector.

22.02 04 Monetary Economics

The study of the nature and role of money in a modern economy, of theory of money and of monetary institutions.

22.02 05 National Income

The study of the principles and theories of levelling, growth, stability, and composition of a nation's or region's income, including the influence of taxing, borrowing, and spending at National, Provincial, and local levels.

22.02 06 Public Finance

The study of the theories, policies, and practices used by local, Provincial or Central governments in generating revenues and managing public moneys and public expenditure.

22.02 07 Economic Growth and Development

The study of the principles of applying analytical and quantitative techniques in explaining the factors that increase prosperity and those causing institutional change.

22.02 08 Consumer Economics

The study of the economic principles and theories associated with the interaction of individual consumers, or groups of consumers, with the production and consumption of goods and services.

22.02 09 Comparative Economic Systems

The study of the differences between economies concerning their arrangements for the production, distribution, and consumption of goods and services; the differences between economic explanations of the production, distribution, and consumption of goods and services; and the evolution of economies toward industrialism, the growth of the world economy, and the growth of international trade.

22.02 10 Economics of Human Resources

The study of the methods of analysing an individual's education, skills, and potential, and the utilisation of this information in formulating economic plans and policies.

22.02 11 Labour and Manpower Economics

The study of the employment of the labour resource, and its wages, employment conditions, and organisation into unions; capital resources and the man-made instruments of production; and natural resources such as land, mineral wealth, and water.

22.02 12 Economics of Natural Resources

The study of the extent and potential use of wealth supplied by nature, including the analysis of soil fertility, mineral deposits, and water power.

22.02 13 Business and Industrial Economics

The study of the principles and methods for organising a business firm and for combining resources to produce goods and services, taking account of costs, prices, profits, and the nature and extent of competition in markets.

22.02 13 01 Business Finance

The study of the optimum methods of financing a firm through credit and other instruments available in the money and capital markets.

22.02 13 02 Industrial Organisation

The study of the theory and structure of business and industry, including the principles of invention and innovation, pricing, profit making, anti-trust, competition, and conservation.

22.02 13 03 Industry Studies

The study of alternative industrial organisations, and their impact on public policy.

22.02 13 04 Economics of Industrial Change

The study of the financial aspects of alternative industrial structures and their impact on supply and demand, pricing, and business cycles.

22.02 14 International Economics

The study of international trade, finance, investment, and money supply; foreign exchange; foreign aid; and tariffs.

22.02 14 01 International Finance

The study of principles and techniques of conducting financial transactions among nation states, including such topics as money markets, the gold standard, and exchange rates.

22.02 14 02 International Trade

The study of the principles and techniques involved in trade transactions among nation states, including tariffs, the balance of payments, and common market transaction.

22.02 15 Social Economics

The study of the principles and theories relating to the economic effects of social legislation and social policies.

22.02 16 Urban and Rural Economics

The study of the principles and theories of economics that relate to rural and urban areas and to their distinct positions in the overall economy.

22.02 17 Quantitative Economics

The study of the principles and methods of applying quantitative methods to the testing of economic theory, including the making of future economic projections.

22.02 17 01 Econometrics

The study of principles and techniques of using mathematical and statistical methods to verify and develop economic theories.

22.02 17 02 Economic Forecasting

The study of the principles and techniques of projecting economic conditions into the future.

22.02 99 Other Economics (Specify)

22.03 GEOGRAPHY

The study of the distribution and interaction of spatially distributed phenomena related to land, sea and air at both the empirical and theoretical levels.

22.03 01 Cultural Geography

The study of the interaction between economic, social, and political activities of human beings and geographic environments.

22.03 01 01 Medical Geography

The study of the spatial distribution of disease and medical services.

22.03 01 02 Political Geography

The study of the distribution of power at international, national and local scales, and its interaction with population and resource distribution.

22.03 01 03 Population Studies

The study of the evolving spatial distribution of world population in relation to resources.

22.03 01 04 Recreational Geography

The study of the way in which environments are used for recreation and the impact of use on the environment.

22.03 01 05 Social Geography

The study of distribution and functional relations of social groups in geographic environments.

22.03 02 Economic Geography

The study of the effect and interrelationships of the production, distribution, and consumption of goods and resources with respect to geographical features.

22.03 02 01 Agricultural Geography

The study of geographical and ecological environments within agricultural areas, such as their suitability for growing crops.

22.03 02 02 Industrial Geography

The study of the geographical and ecological environments that are involved in manufacturing and production.

22.03 02 03 Locational Analysis

The study of the principles and methods for analysing nodes and networks in the landscape, including the analysis of geographic barriers and economic corridors.

22.03 03 Historical Geography

The study of the developments, changes, events, discoveries, trends, and other phenomena associated with geography over extended periods of time, including the history of geographical thought.

22.03 04 Geographic Research Methods and Techniques

The study of the principles, methods, and techniques for conducting geographic research and projects.

22.03 04 01 Cartography

The study of the theories, methods, and techniques for making and producing maps.

22.03 04 02 Geographic Field Methods

The study of the principles and techniques used in on-site geographic field studies.

22.03 04 03 Quantitative Methods and Modelling

The study and use of mathematical and statistical methods to describe and predict geographical systems and the environment.

22.03 04 04 Remote Sensing

The study of the principles and techniques of identifying and determining characteristics of physical objects through analysis of data from a measuring device that does not come into contact with these objects, including aerial photography, radar imagery, infra-red photography, and multispectral scanner imagery produced by remote-sensing techniques.

22.03 05 Physical Geography

The study of the exterior physical features and changes of the earth in land, water and air.

22.03 05 01 Bio-geography

The study of the geographic distribution of living things, their activities, and how they affect the physical earth.

22.03 05 02 Climatology

The study of the nature of and the processes affecting and controlling the earth's climates on planetary, regional and local scales.

22.03 05 03 Environmental Studies

The study of the earth's physical environment; factors controlling and modifying the environment; resources; pollution and management.

22.03 05 04 Geomorphology

The study of the origin and evolution of surface features and landforms.

22.03 05 05 Meteorology

The study of physical and dynamical factors affecting and controlling the atmosphere and its weather on planetary, synoptic and local scales.

22.03 05 06 Oceanography

The study of the ocean and its phenomena, including the physical and chemical properties of water; the topography and composition of the ocean bottom; waves, currents, and tides; and the formation of islands.

22.03 05 07 Soils Geography

The study of the various compositions of soils and of the principles of fertility, irrigation, and cultivation as applied to the earth's surface.

22.03 06 Regional Geography

The study of the geography of an area of any size that is homogeneous with respect to specific criteria, including the boundaries of states and their subdivisions.

22.03 06 01 Specialised Regional Environments

The study of the geography of particular regional environments with respect to features which make them distinct or unique.

22.03 06 02 Specialised Regional Land Masses

The study of the geography of particular regional land masses with respect to features which make them distinct or unique.

22.03 06 03 Specialised Regional Political States

The study of the geography of particular regional political states with respect to features which make them distinct or unique.

22.03 07 Transportation Geography

The study of passenger and freight movement in relation to geographic environments.

22.03 08 Urban Geography

The study of the spatially distributed phenomena of urban systems varying in scale from hamlets to metropolitan regions.

22.03 99 Other Geography (Specify)

22.04 HISTORY

The study of the past, including the recording, gathering, criticising, synthesising, and interpreting evidence about past events.

22.04 01 Constitutional and Administrative History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with constitutions of states and the administrative processes of governments.

22.04 02 Diplomatic History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the art of conducting negotiations between nations, or of transacting international business.

22.04 03 Economic History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with wealth, its nature, production, distribution, and consumption and accompanying relationships.

22.04 04 Historiography

The study of the literature, philosophy, methods, and methodology of the subject matter of history.

22.04 05 History of Science

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with systematised knowledge, or the branches of knowledge that are characterised by observation, experiment, facts, laws, and skills.

22.04 06 Intellectual and Cultural History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with understanding, reasoning, and training of the mind or behavioural faculties.

22.04 07 Labour History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the labouring classes.

22.04 08 Political History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the methods and policies of governments, politicians, and political parties.

22.04 09 Religious History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with systems of faith in or worship of a supreme being, ethical values, or a philosophy of life.

22.04 10 Social History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the interactions of human beings in matters affecting their common welfare.

22.04 11 Urban History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with towns and cities.

22.04 20 African History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the continent of Africa and its inhabitants, but excluding the detailed history of Southern Africa and its inhabitants.

22.04 21 American Colonial History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the thirteen British colonies which became the United States of America during the seventeenth and eighteenth centuries.

22.04 22 Antarctic History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the continent of Antarctica and its inhabitants.

22.04 23 Asian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the Asian continent and its inhabitants.

22.04 24 Australasian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with Australia and New Zealand.

22.04 25 British History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with Great Britain, the British Commonwealth, and their inhabitants.

22.04 26 Canadian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with Canada and its inhabitants.

22.04 27 European History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the continent of Europe and its inhabitants.

22.04 28 Latin American History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with that part of the American continents south of the United States and its inhabitants.

22.04 29 Mediterranean History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the regions and nation states surrounding the Mediterranean Sea.

22.04 30 Oceanian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the islands of the Central and South Pacific, including Micronesia, Melanesia, and Polynesia.

22.04 31 Russian History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with Russia and its inhabitants.

22.04 32 Southern African History

The detailed study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with Southern Africa and its inhabitants.

22.04 33 United States History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the United States of America and its inhabitants.

22.04 34 World History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the nation states and inhabitants of the world.

22.04 50 Ancient History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the period before the end of the Western Roman Empire.

22.04.51 Contemporary History

The study of the development, changes, events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the present time.

22.04 52 Mediaeval History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the Middle Ages, usually dated A.D. 700 to 1500.

22.04 53 Modern History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with the time period following the Middle Ages, usually dated after A.D. 1500.

22.04 70 Minority Group History

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with groups that differ in race, religion, or ethnic background from the majority of a population.

22.04 71 History of Women

The study of the development, changes, past events, discoveries, trends, individuals, institutions, ideas, artefacts, and the systematic accounting of other phenomena associated with women.

22.04 99 Other History (Specify)

22.05 POLITICAL SCIENCE

The study of the description and analysis of political institutions and processes, and of the origin, development, geographical units, forms, sources of authority, powers, purposes, functions, and operations of government.

22.05 01 South African Political Systems

The study of the processes and structures of governance within the Republic of South Africa at the local, regional, and national levels.

22.05 02 Citizenship

The study of the rights and responsibilities of membership in a given polity and the development of understandings and attitudes conducive to effective participation in the civic affairs of that polity.

22.05 03 Comparative Political Systems

The study and comparative analysis of the similarities and differences of political institutions, processes, and behaviour in different countries and political subdivisions.

22.05 03 01 African Political Systems

The study of the development, organisation, and operation of the political institutions and behaviour of the sub-Saharan countries excluding the Republic of South Africa; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 03 02 Asian Political Systems

The study of the development, organisation, and operation of the political institutions and behaviour of the countries and political subdivisions of the Asian continent; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 03 03 Communist Political Systems

The study of the development, organisation, and operation of the political institutions and behaviour of the countries and political subdivisions throughout the world that embrace the theories and systems of communism; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 03 04 Latin American Political Systems

The study of the development, organisation, and operation of the political institutions and behaviour of the countries south of the United States that are a part of the American continents; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 03 05 Middle Eastern Political Systems

The study of the development, organisation, and operation of the political institutions and behaviour of the countries lying east of the Mediterranean and Aegean Seas to India; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 03 06 Political Systems of the United States of America

The study of the development, organisation, and operation of the political institutions and behaviour of the United States of America; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 03 07 Western European Political Systems

The study of the development, organisation, and operation of the political institutions and behaviour of the non-communist countries of Europe; including the influence of social and cultural structures, the sources and nature of political ideologies, and the formation and influence of political parties and interest groups.

22.05 04 Contemporary World Affairs

The study of economic, sociological, political, legal, cultural, and other factors which influence the present relations between nations.

25.05 05 International Relations

The study of agencies, operations, and principles involved in communication and interaction among nations, with emphasis upon the relationship between political subdivisions and governments.

22.05 05 01 South African Foreign Policy

The study of the history and development and principles and methods associated with the relationship of the South African Government toward other nations.

22.05 05 02 Comparative Foreign Policy

The study and comparative analysis of the principles and methods by which the governments and nations of the world interact with each other.

22.05 05 03 Foreign Policy Formulation

The study of the principles and procedures by which foreign policy is developed by groups and individuals inside and outside of government.

22.05 05 04 International Organisations

The study of the structure, operations, and policies of the political, economic, and social organisations of the world.

22.05 06 Political Behaviour

The study of theories, methods, and principles associated with the political behaviour of individuals, groups, organisations, and governments.

22.05 07 Political Parties and Public Opinion

The study of development, organisation, and operation of political parties and pressure groups as influenced or guided by public opinion.

22.05 08 Political Socialisation

The study of ways in which society transmits political orientations, including knowledge, norms, and practices, from one generation to the next.

22.05 09 Political Structures

The study of the various organisational bodies and entities which constitute a political system.

22.05 10 Political Theory

The study of various political theories and philosophies and of the development of modern methodological techniques related to the analysis of political science.

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22.05 10 01 American Political Theory

The study of the historical development and cultural influence of political thought of the United States, including the role of politicians, novelists, and academics, and such theories as puritanism, liberalism, conservatism, and populism.

22.05 10 02 Communism

The study of the historical development and cultural influence of the system of social organisation based on the holding of all property in common, actual ownership being ascribed to the community as a whole or to the state.

22.05 10 03 Ethics and Politics

The study of the role and influence of moral foundations, including liberty, authority, and equality, on the historical development of political theory.

22.05 10 04 Political Ideology

The study of the role and influence of natural laws, churches or other religious bodies, and historical developments on the formulation of political ideologies.

22.05 10 05 Southern African Political Theory

The study of the historical development and cultural influence of political thought of Southern Africa, including the role of politicians, novelists, and academics, and such theories as puritanism, liberalism, conservatism, and populism.

22.05 11 Provincial, Regional and Local Government

The study of the principles, theories, and development of the structure and policies of Provincial, regional and local governments and their agencies.

22.05 99 Other Political Science (Specify)

22.06 SOCIOLOGY

The study of human society, social institutions, and social relationships, including the development, purposes, structures, and functions of human groups.

22.06 01 Community Sociology

The study of the social organisation of a cluster of family groups in a given locality that are linked by a consciousness of similarities in attitudes, values, and problems.

22.06 02 Criminology

The study of the causes of crime and the methods of detecting and dealing with crime and the criminal, including crime statistics, theories of punishment, and the role of law enforcement in society as an agent for the prevention and treatment of crime.

22.06 03 Demography and Human Ecology

The study of vital social statistics, including births, deaths, diseases, marriages, and education rates of populations.

22.06 03 01 Population Change

The study of the dynamics of population change, including the effects of births, deaths, and migrations.

22.06 03 02 Population Problems

The study of the problems associated with the ability to monitor populations and of the influence of such factors as overpopulation, mortality, and fertility.

22.06 03 03 Population Theory

The study of the cultural and social phases of population change, and the implications of birth and death rates and migration on such changes.

22.06 04 Juvenile Delinquency

The study of youths, usually under 18 years of age, whose behaviour is characterised by antisocial behaviour, violations of the law, disobedience, or intractability which generally requires action by the juvenile court system.

22.06 05 Marriage and Family

The study of the traditions and roles of courtship behaviour and marriage, and family structures and relationships of the different cultures of the world.

22.06 05 01 Marriage and Family Counselling

The study of the theories, principles, and techniques of helping people to identify, deal with, and resolve problems related to marriage and family living.

22.06 05 02 Sociology of Marriage

The study of the history and development of the institution of marriage, including the role of partners, legal sanctions, customs and folklore, and processes of union and dissolution.

22.06 05 03 Sociology of the Family

The study of the development of the family unit, including the analysis of member roles, unity and disunity, and comparative family organizations and forms.

22.06 06 Philosophy of Sociology

The study of the history and development of the components of human society, the theories of social structure and conflict, and the comparative analysis of various social systems.

22.06 06 01 Comparative Sociology

The study of the similarities and differences between social institutions and relationships in different countries and cultures, and of differing conceptions of the goals and methods of sociology.

22.06 06 02 History and Development of Sociology and Social Thought

The study of the development, change, and trends in social institutions and relationships, and the systematic accounting of past events in human societies.

22.06 06 03 Theory of Social Conflict

The study of the origins, historical development, and philosophical bases of wars, feuds, revolutions, and other forms of discord in social groups.

22.06 06 04 Theory of Social Structures

The study of the structures and processes that govern social groups, including the concepts of leadership, norms, roles, status, motivation, communication, co-operation, and competition.

22.06 07 Psychological Sociology

The study of the relationship of the individual to social groups with emphasis on the socialisation process, cultural influences, social organisation and disorganisation, symbolic interaction, mass behaviour, and attitudes.

22.06 07 01 Collective Behaviour

The study of the dynamics of organisational and occupational memberships, particularly those which are based upon racial or ethnic factors.

22.06 07 02 Socialisation

The study of the dynamics of role and symbolic social interaction with emphasis on the influence of sex roles.

22.06 08 Rural Sociology

The study of the influence of the family, school, church, local government, and health and welfare on the social development of groups and individuals in specific rural areas.

22.06 09 Quantitative and Qualitative Methods

The study of the principles and techniques of designing experiments, and using mathematical, statistical and other methods in Sociology.

22.06 10 Social Control and Deviance

The study of group behaviours and the methods by which they enforce behavioural expectations and discourage deviations from the norm, with emphasis on the use and misuse of drugs, narcotics, and alcohol, and suicide, homicide, and sex offences.

22.06 11 Social Institutions

The study of the theory, development, composition, structure, and goals of social institutions and their interactions with the members of society, with emphasis on the institutions of religion, medicine, science, art, and education.

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22.06 15 01 Intergroup Relations

The study of the sociological dynamics of intergroup relations in contemporary societies that are racially, ethnically and culturally plural, including their socio-economic status, legal status attitudes, and ideological orientation as they are effected by educational policies, housing, activities of interest groups, and other social phenomena.

22.06 15 02 Small Groups

The study of the nature of role differentiation, group uniformity, problem-solving behaviour, status and power, interpersonal exchanges, and social processes of small numbers of individuals who are members of specific groups.

22.06 15 03 Women Studies

The study of the role of women in contemporary society, including their socio-economic status, dominant-minority status, legal status, attitudes, and ideological orientation as they are affected by existing social phenomena.

22.06 99 Other Sociology (Specify)

22.99 OTHER SOCIAL SCIENCES AND SOCIAL STUDIES (SPECIFY)

Subject matter that cannot be subsumed under an aggregate, general, or introductory element that already exists within the above structure.

22.06 12 Social Organisation and Change

The study of the nature and characteristics of groups, institutions, and agencies that comprise the structure of society.

22.06 12 01 Social Stratification

The study of the nature and characteristics of hierarchical groups in society, such as social classes and castes.

22.06 12 02 Futuristics

The study of possible alternative future forms of social organisations and institutions.

22.06 12 03 Social Structure

The study of the development, pattern, and maintenance of economic, political, and social institutions and their integration or not with various social groups.

22.06 12 04 Social Movements

The study of the impact upon individual and social structures of rapid social change and cultural contact, including reform, revolution, and rapid technological change.

22.06 13 Social Problems

The study of the theory, nature, and cause of family disorganisation, population imbalances, delinquency, crime, poverty, and ethnic group conflicts that involve the maladjustment of groups and individuals and cause conflict in society.

22.06 14 Urban Sociology

The study of the influence of ecological and institutional factors on the social development of groups and individuals in specific urban areas.

22.06 15 Sociology of Groups

The study of the theories and principles involved with the interaction of individuals and groups, and groups with other groups, in identified segments of society.