



Department of Science and Technology



Human Sciences Research Council

**SOUTH AFRICAN SURVEY OF
RESEARCH AND EXPERIMENTAL DEVELOPMENT INPUTS**

2003/2004

CODES
(RF & SEO Codes)

(Government, Science Councils, Higher Education, Non-Profit Organisations)

Acknowledgements:

These Codes have been compiled with reference to the
Organisation for Economic Cooperation and Development (OECD) Frascati Manual and the
South Africa Department of Trade and Industry (DTI) version 5 SIC Codes.

APPENDIX B: RESEARCH FIELD (RF) CLASSIFICATIONS

Please choose the RF classification which most appropriately describes the scientific discipline or field of research you are practising.

DIVISION 1 CATEGORY	NATURAL SCIENCES, TECHNOLOGY AND ENGINEERING GROUP	
<i>Mathematical Sciences</i>	RF10101	Pure mathematics
	RF10102	Applied mathematics
	RF10103	Statistics
	RF10199	Other mathematical sciences not classified elsewhere
<i>Physical Sciences</i>	RF10201	Astronomical sciences
	RF10202	Theoretical and condensed matter physics
	RF10203	Atomic, molecular, nuclear, particle and plasma physics
	RF10204	Acoustic and optical physics
	RF10205	Solid State physics
	RF10299	Other physical sciences not classified elsewhere
<i>Chemical Sciences</i>	RF10301	Physical chemistry (including theoretical and structural)
	RF10302	Inorganic chemistry
	RF10303	Organic chemistry
	RF10304	Analytical chemistry
	RF10305	Speciality Chemicals
	RF10399	Other chemical sciences not classified elsewhere
<i>Earth Sciences</i>	RF10401	Geology
	RF10402	Geophysics
	RF10403	Geochemistry
	RF10404	Oceanography
	RF10405	Hydrology
	RF10406	Atmospheric sciences
<i>Information, Computer & Communication Technologies</i>	RF10499	Other earth sciences not classified elsewhere
	RF10501	Information systems
	RF10502	Hardware
	RF10503	Software
	RF10504	Current information technology
	RF10505	Communication
	RF10506	Security system
<i>Applied Sciences and Technologies</i>	RF10599	Other information, computer & communication technologies not elsewhere classified
	RF10601	Aerospace technologies and engineering
	RF10602	Manufacturing and process technologies and engineering
	RF10603	Nuclear technology
	RF10604	Educational technology
	RF10605	Resource-based industry
	RF10606	Energy Industry
	RF10607	Industrial design
	RF10608	Water technology
<i>Engineering Sciences</i>	RF10699	Other applied sciences and technologies not elsewhere classified
	RF10701	Mechanical and industrial engineering
	RF10702	Chemical engineering
	RF10703	Mining and mineral processing

	RF10704 RF10705 RF10706 RF10707 RF10708 RF10709 RF10710 RF10711 RF10799	Civil engineering Electrical and electronic engineering Agriculture Engineering Food Engineering Environmental Engineering Nuclear engineering and radiation technology Mechanisation and design engineering Maritime Technology Other engineering sciences not elsewhere classified
Biological Sciences	RF10801 RF10802 RF10803 RF10804 RF10805 RF10806 RF10807 RF10808 RF10899	Biochemistry Genetics and molecular biology Microbiology Botany Zoology Ecology Genetic engineering Biotechnology Other biological sciences not elsewhere classified
Agricultural Sciences	RF10901 RF10902 RF10903 RF10904 RF10905 RF10906 RF10907 RF10908 RF10909 RF10910 RF10999	Soil and water sciences Crop and pasture production (including rice) Horticulture (including plantation and fruit crops) Animal production Veterinary sciences Forestry sciences Fisheries sciences Food and nutrition development Aquaculture Plant physiology Other agricultural sciences not elsewhere classified
Medical and Health Sciences	RF11001 RF11002 RF11003 RF11004 RF11005 RF11006 RF11007 RF11008 RF11009 RF11010 RF11011 RF11012 RF11099	Immunology Medical biochemistry and clinical chemistry Medical microbiology Pharmacology Physiology Neurosciences Clinical sciences Public health, environmental & occupational health & safety research Nutrition (public health research) Health services research (including bioethics) Health care system, industries and technologies. Pharmaceutical industry Other medical and health services not elsewhere classified
Environmental Sciences	RF11101 RF11102 RF11103 RF11104 RF11199	Environmental studies Environment technology/industry Environmental issues and assessment Environmental management and bioremediation Other environmental science not elsewhere classified
Material Sciences	RF11201 RF11202 RF11203 RF11204 RF11299	Electronic materials Functional materials Polymeric materials New materials and technologies Other material science not elsewhere classified
Marine Sciences	RF11301 RF11302 RF11303 RF11304 RF11399	Marine biology Algae biotechnology Fishing technology Marine chemistry Other marine sciences not elsewhere classified

DIVISION 2	SOCIAL SCIENCES AND HUMANITIES	
CATEGORY	GROUP	
<i>Social Sciences</i>	RF20101 RF20102 RF20103 RF20104 RF20105 RF20106 RF20107 RF20108 RF20109 RF20110 RF20111 RF20112 RF20113 RF20114 RF20115 RF20116 RF20117 RF20118 RF20119 RF20199	Accounting Economics Management studies Political sciences and public policy Architecture and habitat Sociology Archaeology and history Geography Population studies Law Psychology Education Media and communications studies Finance Anthropology Transportation studies Emerging issues Technology management Tourism Other social sciences not elsewhere classified
<i>Humanities</i>	RF20201 RF20202 RF20203 RF20204 RF20205 RF20206 RF20207 RF20299	Languages and literature Historical and civilisation studies Philosophy Arts and culture Religious studies Dances Music Other humanities not elsewhere classified

APPENDIX C: SOCIO-ECONOMIC OBJECTIVE (SEO) CLASSIFICATIONS

Please choose the SEO classification that most appropriately describes the sector of the national economy that will be the main beneficiary of your R&D.

DIVISION 1	DEFENCE	
CATEGORY	GROUP	
<i>Defence</i>	S10101	Defence
	S10102	Defence Equipment
	S10199	Other defence not elsewhere classified

DIVISION 2	ECONOMIC DEVELOPMENT	
CATEGORY	GROUP	
<i>Plant Production And Plant Primary Products</i>	S20101	Field crops
	S20102	Plantation crops
	S20103	Horticultural crops
	S20104	Forestry
	S20105	Primary products from plants
	S20106	By-product utilisation
	S20199	Other plant production and plant primary products not elsewhere classified.
<i>Animal Production and Animal Primary Products</i>	S20201	Livestock
	S20202	Pasture, browse and fodder crops
	S20203	Fisheries products
	S20204	Primary & by-products from animals
	S20299	Other animal production and animal primary products not elsewhere classified
<i>Mineral resources (excluding energy)</i>	S20301	Exploration
	S20302	Primary mining and extraction processes
	S20304	First stage treatment of ores and minerals
	S20399	Other mineral resources (excluding energy) not elsewhere classified
<i>Energy resources</i>	S20401	Exploration
	S20402	Mining and extraction
	S20403	Preparation and supply of energy source materials
	S20404	Non-conventional energy resources
	S20405	Nuclear Energy
	S20499	Other energy resources not elsewhere classified
<i>Energy supply</i>	S20501	Energy transformation
	S20502	Renewable energy
	S20503	Energy distribution
	S20504	Conservation and efficiency
	S20505	Energy Issues
	S20599	Other energy supply not elsewhere classified

Manufacturing	S20601	Processed food products and beverages
	S20602	Fibre processing and textiles, footwear and leather products
	S20603	Wood, wood products and paper
	S20604	Human pharmaceutical products
	S20605	Veterinary pharmaceutical products
	S20606	Agricultural chemicals
	S20607	Industrial chemicals and related products
	S20608	Basic metal products (including smelting)
	S20609	Industrial mineral products
	S20610	Fabricated metal products
	S20611	Transport equipment
	S20612	Computer hardware and electronic equipment
	S20613	Communication equipment
	S20614	Instrumentation
	S20615	Machinery and equipment
	S20616	Latex product industry
	S20617	Established manufacturing practices supporting technologies
	S20618	Materials performance and processes/ analysis
	S20619	Milling and process materials
	S20620	Synthesis and design of fine and speciality chemicals
	S20699	Other manufactured products not elsewhere classified
Construction	S20701	Planning
	S20702	Design
	S20703	Construction processes
	S20704	Building management and services
	S20799	Other construction not elsewhere classified
Transport	S20801	Ground transport
	S20802	Water transport
	S20803	Air & space transport
	S20899	Other transport not elsewhere classified
Information and Communication Services	S20901	Computer software and services
	S20902	Information services (including library)
	S20903	Communication services
	S20999	Other Information and communication services not elsewhere classified
Commercial Services	S21001	Electricity, gas and water services and utilities
	S21002	Waste management and recycling
	S21003	Wholesale and retail trade
	S21004	Finance, property and business services
	S21005	Tourism
	S21099	Other commercial services not elsewhere classified
Economic Framework	S21101	Macroeconomics issue
	S21102	Microeconomics issues
	S21103	International trade issues
	S21104	Management and productivity issues
	S21105	Measurement standards and calibration services
	S21106	Commercialisation
	S21107	Socio-economic development
	S21108	Economic development and environment
	S21109	Human resource management
	S21199	Other economic issues not elsewhere classified
Natural Resources	S21201	Soil resources
	S21202	Water resources
	S21203	Biodiversity
	S21204	Bioactive product
	S21205	Industrial raw materials
	S21006	Mineral resource
	S21299	Other natural resources not elsewhere classified

DIVISION 3	SOCIETY	
CATEGORY	GROUP	
Health	S30101	Clinical (organs, diseases and conditions)
	S30102	Public health
	S30103	Health and support services
	S30199	Other health not elsewhere classified
Education and Training	S30201	Early childhood and primary education
	S30202	Secondary education
	S30203	Tertiary education
	S30204	Technical and further education
	S30205	Special education
	S30206	Computer base teaching and learning
	S30207	Education policy
	S30208	Teaching
	S30209	Educational administration
	S30299	Other education and training not elsewhere classified
Social Development and Community Services	S30301	Community services
	S30302	Public services
	S30303	Art, sport and recreation
	S30304	International relations
	S30305	Ethical issues
	S30306	Nation building
	S30307	Urban issues
	S30399	Other social development and community services not elsewhere classified

DIVISION 4	ENVIRONMENT	
CATEGORY	GROUP	
Environmental Knowledge	S40101	Climate and atmosphere
	S40102	Ocean
	S40103	Water
	S40104	Land
	S40105	Nature conservation
	S40106	Social environment
	S40107	River
	S40199	Other environmental knowledge not elsewhere classified
Environmental Aspects of Development	S40201	Plant production and plant primary products (including forestry)
	S40202	Animal production and animal primary products (including fishing)
	S40203	Mineral resources (excluding energy)
	S40204	Energy resources
	S40205	Energy supply
	S40206	Manufacturing
	S40207	Construction
	S40208	Transport
	S40209	Information and communication services
	S40210	Commercial services
	S40211	Environmental economic framework
	S40299	Other environment aspect of development not elsewhere classified
Environmental Management & Other Aspects	S40301	Environmental management
	S40302	Waste management and recycling
	S40399	Other environmental aspects not elsewhere classified

DIVISION 5	ADVANCEMENT OF KNOWLEDGE	
CATEGORY	GROUP	
<i>Natural Sciences, Technologies and Engineering</i>	S50101	Mathematical sciences
	S50102	Physical sciences
	S50103	Chemical sciences
	S50104	Earth sciences
	S50105	Information, computer and communication technologies
	S50106	Applied sciences and technologies
	S50107	Engineering sciences
	S50108	Biological sciences
	S50109	Agricultural sciences
	S50110	Medical and health sciences
	S50111	Multimedia
	S50199	Other natural science, technologies and engineering not elsewhere classified
<i>Social Sciences and Humanities</i>	S50201	Social sciences
	S50202	Humanities
	S50203	Cyberlaw
	S50299	Other social sciences and humanities not elsewhere classified