



Department of Science and Technology



Statistics South Africa



Human Sciences Research Council

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

**2004/2005**

**CODES**  
(RF & SEO Codes)

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

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These Codes have been compiled with reference to the  
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South Africa Department of Trade and Industry (DTI) version 5 SIC Codes.

## APPENDIX A: 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  | NATURAL SCIENCES, TECHNOLOGY AND ENGINEERING |   |
|---|--|---|
| CATEGORY  | GROUP  |   |
| <b>Mathematical Sciences</b>                                  | RF10101                                      | Pure mathematics  |
|   | RF10102                                      | Applied mathematics   |
|   | RF10103                                      | Statistics  |
|   | RF10199                                      | Other mathematical sciences not classified elsewhere                              |
| <b>Physical Sciences</b>                                      | 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                                  |
| <b>Chemical Sciences</b>                                      | 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                                  |
| <b>Earth Sciences</b>   | RF10401                                      | Geology   |
|   | RF10402                                      | Geophysics  |
|   | RF10403                                      | Geochemistry  |
|   | RF10404                                      | Oceanography  |
|   | RF10405                                      | Hydrology   |
|   | RF10406                                      | Atmospheric sciences  |
|   | RF10499                                      | Other earth sciences not classified elsewhere                                     |
| <b>Information, Computer &amp; Communication Technologies</b> | RF10501                                      | Information systems   |
|   | RF10502                                      | Hardware  |
|   | RF10503                                      | Software  |
|   | RF10504                                      | Current information technology  |
|   | RF10505                                      | Communication   |
|   | RF10506                                      | Security system   |
|   | RF10599                                      | Other information, computer & communication technologies not elsewhere classified |
| <b>Applied Sciences and Technologies</b>                      | 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  |
|   | RF10699                                      | Other applied sciences and technologies not elsewhere classified                  |
| <b>Engineering Sciences</b>                                   | RF10701                                      | Mechanical and industrial engineering   |
|   | RF10702                                      | Chemical engineering  |
|   | RF10703                                      | Mining and mineral processing   |
|   | RF10704                                      | Civil engineering   |
|   | RF10705                                      | Electrical and electronic engineering   |
|   | RF10706                                      | Agriculture Engineering   |
|   | RF10707                                      | Food Engineering  |
|   | RF10708                                      | Environmental Engineering   |
|   | RF10709                                      | Nuclear engineering and radiation technology                                      |
|   | RF10710                                      | Mechanisation and design engineering  |
|   | RF10711                                      | Maritime Technology   |
|   | RF10799                                      | Other engineering sciences not elsewhere classified                               |

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

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

## APPENDIX B: 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<br/>And Plant<br/>Primary<br/>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<br/>Production and<br/>Animal Primary<br/>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<br/>resources<br/>(excluding<br/>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<br/>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                                 |

|   |        |   |
|---|--------|---|
| <b>Manufacturing</b>                          | 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                  |
| <b>Construction</b>                           | S20701 | Planning  |
|   | S20702 | Design  |
|   | S20703 | Construction processes  |
|   | S20704 | Building management and services                                      |
|   | S20799 | Other construction not elsewhere classified                           |
| <b>Transport</b>                              | S20801 | Ground transport  |
|   | S20802 | Water transport   |
|   | S20803 | Air & space transport   |
|   | S20899 | Other transport not elsewhere classified                              |
| <b>Information and Communication Services</b> | S20901 | Computer software and services  |
|   | S20902 | Information services (including library)                              |
|   | S20903 | Communication services  |
|   | S20999 | Other Information and communication services not elsewhere classified |
| <b>Commercial Services</b>                    | 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                    |
| <b>Economic Framework</b>                     | 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                        |
| <b>Natural Resources</b>                      | 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                      |

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

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

| <b>DIVISION 5</b>  | <b>ADVANCEMENT OF KNOWLEDGE</b> |  |
|--|---------------------------------|--|
| <b>CATEGORY</b>  | <b>GROUP</b>                    |  |
| <b><i>Natural Sciences, Technologies and Engineering</i></b> | 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 |
| <b><i>Social Sciences and Humanities</i></b>                 | S50201                          | Social sciences  |
|  | S50202                          | Humanities   |
|  | S50203                          | Cyberlaw   |
|  | S50299                          | Other social sciences and humanities not elsewhere classified                |