Domenii științifice

Domain Code:	**SH**
Subdomain Code:	**SH1, SH2, SH3, SH4, SH5, SH6**
Research Area Code:	**SH1_1...SH1_15, SH2_1...SH2_10,.....**

DOMAIN
SOCIAL SCIENCES AND HUMANITIES

SH1	**Individuals, Markets and Organisations** Economics, finance and management
SH1_1	Macroeconomics; monetary economics; economic growth
SH1_2	International management; international trade; international business; spatial economics
SH1_3	Development economics, health economics, education economics
SH1_4	Financial economics; banking; corporate finance; international finance; accounting; auditing; insurance
SH1_5	Labour and demographic economics; human resource management
SH1_6	Econometrics; operations research
SH1_7	Behavioural economics; experimental economics; neuro-economics
SH1_8	Microeconomics; game theory
SH1_9	Industrial organisation; strategy; entrepreneurship
SH1_10	Management; marketing; organisational behaviour; operations management
SH1_11	Technological change, innovation, research & development
SH1_12	Agricultural economics; energy economics; environmental economics
SH1_13	Public economics; political economics; law and economics
SH1_14	Competition law, contract law, trade law, Intellectual Property Rights
SH1_15	Quantitative economic history and history of economics; institutional economics; economic systems
SH2	**Institutions, Values, Environment and Space** Political science, law, sustainability science, geography, regional studies and planning
SH2_1	Political systems, governance
SH2_2	Democratisation and social movements
SH2_3	Conflict resolution, war, peace building
SH2_4	Constitutions, human rights, comparative law, humanitarian law, anti-discrimination law
SH2_5	International relations, global and transnational governance
SH2_6	Sustainability sciences, environment and resources
SH2_7	Environmental and climate change, societal impact and policy
SH2_8	Energy, transportation and mobility
SH2_9	Urban, regional and rural studies
SH2_10	Land use and regional planning
SH2_11	Human, economic and social geography
SH2_12	GIS, spatial analysis; big data in political, geographical and legal studies
SH3	**The Social World, Diversity, Population** Sociology, social psychology, social anthropology, demography, education, communication
SH3_1	Social structure, social mobility
SH3_2	Inequalities, discrimination, prejudice, aggression and violence, antisocial behaviour
SH3_3	Social integration, exclusion, prosocial behaviour
SH3_4	Attitudes and beliefs
SH3_5	Social influence; power and group behaviour
SH3_6	Kinship; diversity and identities, gender, interethnic relations
SH3_7	Social policies, welfare
SH3_8	Population dynamics; households, family and fertility
SH3_9	Health, ageing and society
SH3_10	Religious studies, ritual; symbolic representation

SH3_11	Social aspects of learning, curriculum studies, educational policies
SH3_12	Communication and information, networks, media
SH3_13	Digital social research
SH3_14	Science and technology studies
SH4	**The Human Mind and Its Complexity** Cognitive science, psychology, linguistics, philosophy of mind
SH4_1	Cognitive basis of human development and education, developmental disorders; comparative cognition
SH4_2	Personality and social cognition; emotion
SH4_3	Clinical and health psychology
SH4_4	Neuropsychology
SH4_5	Attention, perception, action, consciousness
SH4_6	Learning, memory; cognition in ageing
SH4_7	Reasoning, decision-making; intelligence
SH4_8	Language learning and processing (first and second languages)
SH4_9	Theoretical linguistics; computational linguistics
SH4_10	Language typology; historical linguistics
SH4_11	Pragmatics, sociolinguistics, linguistic anthropology, discourse analysis
SH4_12	Philosophy of mind, philosophy of language
SH4_13	Philosophy of science, epistemology, logic
SH5	**Cultures and Cultural Production** Literature, philology, cultural studies, study of the arts, philosophy
SH5_1	Classics, ancient literature and art
SH5_2	Theory and history of literature, comparative literature
SH5_3	Philology and palaeography
SH5_4	Visual and performing arts, film, design
SH5_5	Music and musicology; history of music
SH5_6	History of art and architecture, arts-based research
SH5_7	Museums, exhibitions, conservation and restoration
SH5_8	Cultural studies, cultural identities and memories, cultural heritage
SH5_9	Metaphysics, philosophical anthropology; aesthetics
SH5_10	Ethics; social and political philosophy
SH5_11	History of philosophy
SH5_12	Computational modelling and digitisation in the cultural sphere
SH6	**The Study of the Human Past** Archaeology and history
SH6_1	Historiography, theory and methods in history, including the analysis of digital data
SH6_2	Classical archaeology, history of archaeology
SH6_3	General archaeology, archaeometry, landscape archaeology
SH6_4	Prehistory, palaeoanthropology, palaeodemography, protohistory
SH6_5	Ancient history
SH6_6	Medieval history
SH6_7	Early modern history
SH6_8	Modern and contemporary history
SH6_9	Colonial and post-colonial history
SH6_10	Global history, transnational history, comparative history, entangled histories
SH6_11	Social and economic history
SH6_12	Gender history; cultural history; history of collective identities and memories
SH6_13	History of ideas, intellectual history, history of economic thought
SH6_14	History of science, medicine and technologies

Domain Code:	**PE**
Subdomain Code:	**PE1, PE2, PE3, PE4, PE5, PE6, PE7, PE8, PE9, PE10**
Research Area Code:	**PE1_1...PE1_21, PE2_1...PE2_18,.....**

DOMAIN
PHYSICAL SCIENCES AND ENGINEERING

PE1	**Mathematics** All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics
PE1_1	Logic and foundations
PE1_2	Algebra
PE1_3	Number theory
PE1_4	Algebraic and complex geometry
PE1_5	Lie groups, Lie algebras
PE1_6	Geometry and Global Analysis
PE1_7	Topology
PE1_8	Analysis
PE1_9	Operator algebras and functional analysis
PE1_10	ODE and dynamical systems
PE1_11	Theoretical aspects of partial differential equations
PE1_12	Mathematical physics
PE1_13	Probability
PE1_14	Statistics
PE1_15	Discrete mathematics and combinatorics
PE1_16	Mathematical aspects of computer science
PE1_17	Numerical analysis
PE1_18	Scientific computing and data processing
PE1_19	Control theory and optimisation
PE1_20	Application of mathematics in sciences
PE1_21	Application of mathematics in industry and society
PE2	**Fundamental Constituents of Matter** Particle, nuclear, plasma, atomic, molecular, gas, and optical physics
PE2_1	Fundamental interactions and fields
PE2_2	Particle physics
PE2_3	Nuclear physics
PE2_4	Nuclear astrophysics
PE2_5	Gas and plasma physics
PE2_6	Electromagnetism
PE2_7	Atomic, molecular physics
PE2_8	Ultra-cold atoms and molecules
PE2_9	Optics, non-linear optics and nano-optics
PE2_10	Quantum optics and quantum information
PE2_11	Lasers, ultra-short lasers and laser physics
PE2_12	Relativity
PE2_13	Thermodynamics
PE2_14	Non-linear physics
PE2_15	Metrology and measurement
PE2_16	Statistical physics (gases)

PE3	**Condensed Matter Physics** Structure, electronic properties, fluids, nanosciences, biological physics
PE3_1	Structure of solids, material growth and characterisation
PE3_2	Mechanical and acoustical properties of condensed matter, Lattice dynamics
PE3_3	Transport properties of condensed matter
PE3_4	Electronic properties of materials, surfaces, interfaces, nanostructures, etc.
PE3_5	Physical properties of semiconductors and insulators
PE3_6	Macroscopic quantum phenomena: superconductivity, superfluidity, etc.
PE3_7	Spintronics
PE3_8	Magnetism and strongly correlated systems
PE3_9	Condensed matter – beam interactions (photons, electrons, etc.)
PE3_10	Nanophysics: nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics, etc.
PE3_11	Mesoscopic physics
PE3_12	Molecular electronics
PE3_13	Structure and dynamics of disordered systems: soft matter (gels, colloids, liquid crystals, etc.), liquids, glasses, defects, etc.
PE3_14	Fluid dynamics (physics)
PE3_15	Statistical physics: phase transitions, noise and fluctuations, models of complex systems, etc.
PE3_16	Physics of biological systems
PE4	**Physical and Analytical Chemical Sciences** Analytical chemistry, chemical theory, physical chemistry/chemical physics
PE4_1	Physical chemistry
PE4_2	Spectroscopic and spectrometric techniques
PE4_3	Molecular architecture and Structure
PE4_4	Surface science and nanostructures
PE4_5	Analytical chemistry
PE4_6	Chemical physics
PE4_7	Chemical instrumentation
PE4_8	Electrochemistry, electrodialysis, microfluidics, sensors
PE4_9	Method development in chemistry
PE4_10	Heterogeneous catalysis
PE4_11	Physical chemistry of biological systems
PE4_12	Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions
PE4_13	Theoretical and computational chemistry
PE4_14	Radiation and Nuclear chemistry
PE4_15	Photochemistry
PE4_16	Corrosion
PE4_17	Characterisation methods of materials
PE4_18	Environment chemistry
PE5	**Synthetic Chemistry and Materials** Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry
PE5_1	Structural properties of materials
PE5_2	Solid state materials
PE5_3	Surface modification
PE5_4	Thin films
PE5_5	Ionic liquids
PE5_6	New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles
PE5_7	Biomaterials, biomaterials synthesis
PE5_8	Intelligent materials – self assembled materials
PE5_9	Coordination chemistry

PE5_10	PE5_10 Colloid chemistry
PE5_11	PE5_11 Biological chemistry
PE5_12	PE5_12 Chemistry of condensed matter
PE5_13	Homogeneous catalysis
PE5_14	Macromolecular chemistry
PE5_15	Polymer chemistry
PE5_16	Supramolecular chemistry
PE5_17	Organic chemistry
PE5_18	Medicinal chemistry
PE6	**Computer Science and Informatics** Informatics and information systems, computer science, scientific computing, intelligent systems
PE6_1	Computer architecture, pervasive computing, ubiquitous computing
PE6_2	Computer systems, parallel/distributed systems, sensor networks, embedded systems, cyber-physical systems
PE6_3	Software engineering, operating systems, computer languages
PE6_4	Theoretical computer science, formal methods, and quantum computing
PE6_5	Cryptology, security, privacy, quantum cryptography
PE6_6	Algorithms, distributed, parallel and network algorithms, algorithmic game theory
PE6_7	Artificial intelligence, intelligent systems, multi agent systems
PE6_8	Computer graphics, computer vision, multi media, computer games
PE6_9	Human computer interaction and interface, visualisation and natural language processing
PE6_10	Web and information systems, database systems, information retrieval and digital libraries, data fusion
PE6_11	Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)
PE6_12	Scientific computing, simulation and modelling tools
PE6_13	Bioinformatics, biocomputing, and DNA and molecular computation
PE7	**Systems and Communication Engineering** Electrical, electronic, communication, optical and systems engineering
PE7_1	Control engineering
PE7_2	Electrical engineering: power components and/or systems
PE7_3	Simulation engineering and modelling
PE7_4	(Micro- and nano-) systems engineering
PE7_5	(Micro- and nano-) electronic, optoelectronic and photonic components
PE7_6	Communication technology, high-frequency technology
PE7_7	Signal processing
PE7_8	Networks (communication networks, sensor networks, networks of robots, etc.)
PE7_9	Man-machine interfaces
PE7_10	Robotics
PE7_11	Components and systems for applications (in e.g. medicine, biology, environment)
PE7_12	Electrical energy production, distribution, application
PE8	**Products and Processes Engineering** Product design, process design and control, construction methods, civil engineering, energy processes, material engineering
PE8_1	Aerospace engineering
PE8_2	Chemical engineering, technical chemistry
PE8_3	Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste treatment
PE8_4	Computational engineering
PE8_5	Fluid mechanics, hydraulic-, turbo-, and piston- engines
PE8_6	Energy processes engineering
PE8_7	Mechanical and manufacturing engineering (shaping, mounting, joining, separation)

PE8_8	Materials engineering (biomaterials, metals, ceramics, polymers, composites, etc.)
PE8_9	Production technology, process engineering
PE8_10	Industrial design (product design, ergonomics, man-machine interfaces, etc.)
PE8_11	Sustainable design (for recycling, for environment, eco-design)
PE8_12	Lightweight construction, textile technology
PE8_13	Industrial bioengineering
PE9	**Universe Sciences** Astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation
PE9_1	Solar and interplanetary physics
PE9_2	Planetary systems sciences
PE9_3	Interstellar medium
PE9_4	Formation of stars and planets
PE9_5	Astrobiology
PE9_6	Stars and stellar systems
PE9_7	The Galaxy
PE9_8	Formation and evolution of galaxies
PE9_9	Clusters of galaxies and large scale structures
PE9_10	High energy and particles astronomy – X-rays, cosmic rays, gamma rays, neutrinos
PE9_11	Relativistic astrophysics
PE9_12	Dark matter, dark energy
PE9_13	Gravitational astronomy
PE9_14	Cosmology
PE9_15	Space Sciences
PE9_16	Very large data bases: archiving, handling and analysis
PE9_17	Instrumentation - telescopes, detectors and techniques
PE10	**Earth System Science** Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management
PE10_1	Atmospheric chemistry, atmospheric composition, air pollution
PE10_2	Meteorology, atmospheric physics and dynamics
PE10_3	Climatology and climate change
PE10_4	Terrestrial ecology, land cover change
PE10_5	Geology, tectonics, volcanology
PE10_6	Palaeoclimatology, palaeoecology
PE10_7	Physics of earth's interior, seismology, geodynamics
PE10_8	Oceanography (physical, chemical, biological, geological)
PE10_9	Biogeochemistry, biogeochemical cycles, environmental chemistry
PE10_10	Mineralogy, petrology, igneous petrology, metamorphic petrology
PE10_11	Geochemistry, cosmochemistry, crystal chemistry, isotope geochemistry, thermodynamics
PE10_12	Sedimentology, soil science, palaeontology, earth evolution
PE10_13	Physical geography, geomorphology
PE10_14	Earth observations from space/remote sensing
PE10_15	Geomagnetism, palaeomagnetism
PE10_16	Ozone, upper atmosphere, ionosphere
PE10_17	Hydrology, hydrogeology, engineering and environmental geology, water and soil pollution
PE10_18	Cryosphere, dynamics of snow and ice cover, sea ice, permafrosts and ice sheets

Domain Code:	**LS**
Subdomain Code:	**LS1, LS2, LS3, LS4, LS5, LS6, LS7, LS8, LS9**
Research Area Code:	**LS1_1...LS1_11, LS2_1...LS2_14,.....**

DOMAIN
LIFE SCIENCES

LS1	**Molecular Biology, Biochemistry, Structural Biology and Molecular Biophysics** Molecular synthesis, modification, mechanisms and interactions, biochemistry, structural biology, molecular biophysics signalling pathways
LS1_1	Macromolecular complexes including interactions involving nucleic acids, proteins, lipids and carbohydrates
LS1_2	Biochemistry
LS1_3	DNA synthesis, modification, repair, recombination, degradation
LS1_4	RNA synthesis, processing, modification, degradation
LS1_5	Protein synthesis, modification, turnover
LS1_6	Lipid biology
LS1_7	Glycobiology
LS1_8	Molecular biophysics (e.g. single-molecule approaches, bioenergetics, fluorescence)
LS1_9	Structural biology and its methodologies (e.g. crystallography, cryo-EM, NMR and new technologies)
LS1_10	Molecular mechanisms of signalling pathways
LS1_11	Fundamental aspects of synthetic biology and chemical biology
LS2	**Genetics, 'Omics', Bioinformatics and Systems Biology** Molecular genetics, quantitative genetics, genetic epidemiology, epigenetics, genomics, metagenomics, transcriptomics, proteomics, metabolomics, glycomics, bioinformatics, computational biology, biostatistics, systems biology
LS2_1	Molecular genetics, reverse genetics, forward genetics, genome editing
LS2_2	Non-coding RNAs
LS2_3	Quantitative genetics
LS2_4	Genetic epidemiology
LS2_5	Epigenetics and gene regulation
LS2_6	Genomics (e.g. comparative genomics, functional genomics)
LS2_7	Metagenomics
LS2_8	Transcriptomics
LS2_9	Proteomics
LS2_10	Metabolomics
LS2_11	Glycomics/Lipidomics
LS2_12	Bioinformatics
LS2_13	Computational biology
LS2_14	Biostatistics
LS2_15	Systems biology
LS3	**Cellular and Developmental Biology** Cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation and stem cell biology, in plants and animals, or, where appropriate, in microorganisms
LS3_1	Morphology and functional imaging of cells and tissues
LS3_2	Cytoskeleton and cell behaviour (e.g. control of cell shape, cell migration and cellular mechanosensing)
LS3_3	Organelle biology and trafficking
LS3_4	Cell junctions, cell adhesion, cell communication and the extracellular matrix
LS3_5	Cell signalling and signal transduction
LS3_6	Cell cycle, division and growth
LS3_7	Cell death (including senescence) and autophagy
LS3_8	Cell differentiation, physiology and dynamics

LS3_9	Developmental genetics in animals and plants
LS3_10	Embryology and pattern formation in animals and plants
LS3_11	Tissue organisation and morphogenesis in animals and plants (including biophysical approaches)
LS3_12	Stem cell biology in development, tissue regeneration and ageing, and fundamental aspects of stem cell-based therapies
LS4	**Physiology, Pathophysiology and Endocrinology** Organ physiology, pathophysiology, endocrinology, metabolism, ageing, tumorigenesis, cardiovascular diseases, metabolic syndromes
LS4_1	Organ physiology and pathophysiology
LS4_2	Comparative physiology and pathophysiology
LS4_3	Molecular aspects of endocrinology
LS4_4	Fundamental mechanisms underlying ageing
LS4_5	Metabolism, biological basis of metabolism-related disorders
LS4_6	Fundamental mechanisms underlying cancer
LS4_7	Fundamental mechanisms underlying cardiovascular diseases
LS4_8	Non-communicable diseases (except for neural/psychiatric and immunity-related diseases)
LS5	**Neurosciences and Neural Disorders** Neural cell function and signalling, systems neuroscience, neural bases of cognitive and behavioural processes, neurological and psychiatric disorders
LS5_1	Neural cell function, communication and signalling, neurotransmission in neuronal and/or glial cells
LS5_2	Systems neuroscience and computational neuroscience (e.g. neural networks, neural modelling)
LS5_3	Neuronal development, plasticity and regeneration
LS5_4	Sensation and perception (e.g. sensory systems, sensory processing, pain)
LS5_5	Neural bases of cognitive processes (e.g. memory, learning, attention)
LS5_6	Neural bases of behaviour (e.g. sleep, consciousness, addiction)
LS5_7	Neurological disorders (e.g. neurodegenerative diseases, seizures)
LS5_8	Psychiatric disorders (e.g. affective and anxiety disorders, autism, psychotic disorders)
LS5_9	Neurotrauma and neurovascular conditions (including injury, blood-brain barrier, stroke, neurorehabilitation)
LS6	**Immunity and Infection** The immune system and related disorders, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases
LS6_1	Innate immunity in animals and plants
LS6_2	Adaptive immunity
LS6_3	Regulation and effector functions of the immune response (e.g. cytokines, interferons and chemokines, inflammation, immune signalling, helper T cells, immunological memory, immunological tolerance, cell-mediated cytotoxicity, complement)
LS6_4	Immunological mechanisms in disease (e.g. autoimmunity, allergy, transplantation immunology, tumour immunology)
LS6_5	Biology of pathogens (e.g. bacteria, viruses, parasites, fungi)
LS6_6	Mechanisms of infection (e.g. transmission, virulence factors, host defences, immunity to pathogens, molecular pathogenesis)
LS6_7	Biological basis of prevention and treatment of infection (e.g. infection natural cycle, reservoirs, vectors, vaccines, antimicrobials)
LS6_8	Infectious diseases in animals and plants
LS7	**Applied Medical Technologies, Diagnostics, Therapies and Public Health** Development of tools for diagnosis, monitoring and treatment of diseases, pharmacology, clinical medicine, regenerative medicine, epidemiology and public health
LS7_1	Imaging for medical diagnosis
LS7_2	Genetic tools for medical diagnosis
LS7_3	Other medical technologies for diagnosis and monitoring of diseases
LS7_4	Pharmacology and pharmacogenomics (including drug discovery and design, drug delivery and therapy, toxicology)
LS7_5	Applied gene and cell therapies, regenerative medicine

LS7_6	Radiation therapy
LS7_7	Analgesia and surgery
LS7_8	Epidemiology and public health
LS7_9	Environmental health, occupational medicine
LS7_10	Health services, health care research, medical ethics
LS8	**Ecology, Evolution and Environmental Biology** Population, community and ecosystem ecology, evolutionary biology, behavioural ecology, microbial ecology
LS8_1	Ecosystem and community ecology, macroecology
LS8_2	Biodiversity, conservation biology, conservation genetics
LS8_3	Population biology, population dynamics, population genetics
LS8_4	Evolutionary ecology
LS8_5	Evolutionary genetics
LS8_6	Phylogenetics, systematics, comparative biology
LS8_7	Macroevolution, paleobiology
LS8_8	Coevolution, biological mechanisms and ecology of species interactions (e.g. symbiosis, parasitism, mutualism, food-webs)
LS8_9	Behavioural ecology and evolution
LS8_10	Microbial ecology and evolution
LS8_11	Marine biology and ecology
LS9	**Applied Life Sciences, Biotechnology, and Molecular and Biosystems Engineering** Applied plant and animal sciences, forestry, food sciences, applied biotechnology, environmental, and marine biotechnology, applied bioengineering, biomass and biofuels, biohazards
LS9_1	Applied biotechnology (including transgenic organisms, applied genetics and genomics, biosensors, bioreactors, microbiology, bioactive compounds)
LS9_2	Applied bioengineering, synthetic biology, chemical biology, nanobiotechnology, metabolic engineering, protein and glyco-engineering, tissue engineering, biocatalysis, biomimetics
LS9_3	Applied animal sciences (including animal breeding, veterinary sciences, animal husbandry, animal welfare, aquaculture, fisheries, insect gene drive)
LS9_4	Applied plant sciences (including crop production, plant breeding, agroecology, forestry, soil biology)
LS9_5	Food sciences (including food technology, food safety, nutrition)
LS9_6	Biomass production and utilisation, biofuels
LS9_7	Environmental biotechnology (including bioindicators, bioremediation, biodegradation)
LS9_8	Biohazards (including biological containment, biosafety, biosecurity)
LS9_9	Marine biotechnology (including marine bioproducts, feed resources, genome mining)