For the planning and operation of the evaluation of ERC grant proposals by panels, the following panel structure applies. There are 25 ERC panels to cover all fields of science, engineering and scholarship assigned to three research domains: Physical Sciences and Engineering (10 Panels, PE1–PE10), Life Sciences (9 Panels, LS1–LS9) and Social Sciences and Humanities (6 Panels, SH1–SH6).

The panel names are accompanied by a list of ERC keywords indicating the fields of research covered by the respective ERC panels.
**The ERC keywords must always be read in the overall context of the panel's titles and sub-titles.**

## Social Sciences and Humanities

**SH1   Individuals, Markets and Organisations:** Economics, finance and management

| | |
|---|---|
| SH1_1 | Macroeconomics; monetary economics; economic growth |
| SH1_2 | International trade; international business; international management; spatial economics |
| SH1_3 | Financial economics; monetary 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 | Quantitative economic history; 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 |
| SH2_4 | Legal studies, constitutions, human rights, comparative 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, 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; classroom management |
| SH3_6 | 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 | Social aspects of learning, curriculum studies, educational policies |
| SH3_11 | Communication and information, networks, media |
| SH3_12 | Digital social research |
| SH3_13 | 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 |
| SH4_11 | Pragmatics, sociolinguistics, 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, anthropology, 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; historical linguistics |
| 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 | Social anthropology, religious studies, symbolic representation |
| SH5_10 | Metaphysics, philosophical anthropology; aesthetics |
| SH5_11 | Ethics; social and political philosophy |
| SH5_12 | History of philosophy |
| SH5_13 | 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 |

## 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 | Geometry |
| | PE1_6 | Topology |
| | PE1_7 | Lie groups, Lie algebras |
| | 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 | Acoustics |
| | PE2_13 | Relativity |
| | PE2_14 | Thermodynamics |
| | PE2_15 | Non-linear physics |
| | PE2_16 | General physics |
| | PE2_17 | Metrology and measurement |
| | PE2_18 | Statistical physics (gases) |

**PE3 Condensed Matter Physics:** Structure, electronic properties, fluids, nanosciences, biophysics

| | PE3_1 | Structure of solids and liquids |
|---|---|---|
| | 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 | Semiconductors and insulators: material growth, physical properties |
| | 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.), 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 | Colloid chemistry |
| PE5_11 | Biological chemistry |
| 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 | Molecular chemistry |
| PE5_19 | Combinatorial 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 crypto |
| 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 (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, volcanology |
| | 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, crystal chemistry, isotope geochemistry, thermodynamics |
| | PE10_12 | Sedimentology, soil science, palaeontology, earth evolution |
| | PE10_13 | Physical geography |
| | PE10_14 | Earth observations from space/remote sensing |
| | PE10_15 | Geomagnetism, palaeomagnetism |
| | PE10_16 | Ozone, upper atmosphere, ionosphere |
| | PE10_17 | Hydrology, water and soil pollution |
| | PE10_18 | Cryosphere, dynamics of snow and ice cover, sea ice, permafrosts and ice sheets |

## Life Sciences

**LS1     Molecular and Structural Biology and Biochemistry:** Molecular synthesis, modification and interaction, biochemistry, biophysics, structural biology, metabolism, signal transduction

| | LS1_1 | Molecular interactions |
| | LS1_2 | General biochemistry and metabolism |
| | LS1_3 | DNA synthesis, modification, repair, recombination and degradation |
| | LS1_4 | RNA synthesis, processing, modification and degradation |
| | LS1_5 | Protein synthesis, modification and turnover |
| | LS1_6 | Lipid synthesis, modification and turnover |
| | LS1_7 | Carbohydrate synthesis, modification and turnover |
| | LS1_8 | Biophysics (e.g. transport mechanisms, bioenergetics, fluorescence) |
| | LS1_9 | Structural biology (crystallography and EM) |
| | LS1_10 | Structural biology (NMR) |
| | LS1_11 | Biochemistry and molecular mechanisms of signal transduction |

**LS2      Genetics, Genomics, Bioinformatics and Systems Biology:** Molecular and population genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology, genetic epidemiology

| | |
|---|---|
| LS2_1 | Genomics, comparative genomics, functional genomics |
| LS2_2 | Transcriptomics |
| LS2_3 | Proteomics |
| LS2_4 | Metabolomics |
| LS2_5 | Glycomics |
| LS2_6 | Molecular genetics, reverse genetics and RNAi |
| LS2_7 | Quantitative genetics |
| LS2_8 | Epigenetics and gene regulation |
| LS2_9 | Genetic epidemiology |
| LS2_10 | Bioinformatics |
| LS2_11 | Computational biology |
| LS2_12 | Biostatistics |
| LS2_13 | Systems biology |
| LS2_14 | Biological systems analysis, modelling and simulation |

**LS3      Cellular and Developmental Biology:** Cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals, stem cell biology

| | |
|---|---|
| LS3_1 | Morphology and functional imaging of cells |
| LS3_2 | Cell biology and molecular transport mechanisms |
| LS3_3 | Cell cycle and division |
| LS3_4 | Apoptosis |
| LS3_5 | Cell differentiation, physiology and dynamics |
| LS3_6 | Organelle biology |
| LS3_7 | Cell signalling and cellular interactions |
| LS3_8 | Signal transduction |
| LS3_9 | Development, developmental genetics, pattern formation and embryology in animals |
| LS3_10 | Development, developmental genetics, pattern formation and embryology in plants |
| LS3_11 | Cell genetics |
| LS3_12 | Stem cell biology |

**LS4      Physiology, Pathophysiology and Endocrinology:** Organ physiology, pathophysiology, endocrinology, metabolism, ageing, tumorigenesis, cardiovascular disease, metabolic syndrome

| | |
|---|---|
| LS4_1 | Organ physiology and pathophysiology |
| LS4_2 | Comparative physiology and pathophysiology |
| LS4_3 | Endocrinology |
| LS4_4 | Ageing |
| LS4_5 | Metabolism, biological basis of metabolism related disorders |
| LS4_6 | Cancer and its biological basis |
| LS4_7 | Cardiovascular diseases |
| LS4_8 | Non-communicable diseases (except for neural/psychiatric, immunity-related, metabolism-related disorders, cancer and cardiovascular diseases) |

**LS5    Neurosciences and Neural Disorders:** Neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological and psychiatric disorders

| | |
|---|---|
| LS5_1 | Neuroanatomy and neurophysiology |
| LS5_2 | Molecular and cellular neuroscience |
| LS5_3 | Neurochemistry and neuropharmacology |
| LS5_4 | Sensory systems (e.g. visual system, auditory system) |
| LS5_5 | Mechanisms of pain |
| LS5_6 | Developmental neurobiology |
| LS5_7 | Cognition (e.g. learning, memory, emotions, speech) |
| LS5_8 | Behavioural neuroscience (e.g. sleep, consciousness, handedness) |
| LS5_9 | Systems neuroscience |
| LS5_10 | Neuroimaging and computational neuroscience |
| LS5_11 | Neurological disorders (e.g. Alzheimer's disease, Huntington's disease, Parkinson's disease) |
| LS5_12 | Psychiatric disorders (e.g. schizophrenia, autism, Tourette's syndrome, obsessive compulsive disorder, depression, bipolar disorder, attention deficit hyperactivity disorder) |

**LS6    Immunity and Infection:** The immune system and related disorders, infectious agents and diseases, prevention and treatment of infection

| | |
|---|---|
| LS6_1 | Innate immunity and inflammation |
| LS6_2 | Adaptive immunity |
| LS6_3 | Phagocytosis and cellular immunity |
| LS6_4 | Immunosignalling |
| LS6_5 | Immunological memory and tolerance |
| LS6_6 | Immunogenetics |
| LS6_7 | Microbiology |
| LS6_8 | Virology |
| LS6_9 | Bacteriology |
| LS6_10 | Parasitology |
| LS6_11 | Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide) |
| LS6_12 | Biological basis of immunity related disorders (e.g. autoimmunity) |
| LS6_13 | Veterinary medicine and infectious diseases in animals |

**LS7    Diagnostic Tools, Therapies and Public Health:** Aetiology, diagnosis and treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics

| | |
|---|---|
| LS7_1 | Medical engineering and technology |
| LS7_2 | Diagnostic tools (e.g. genetic, imaging) |
| LS7_3 | Pharmacology, pharmacogenomics, drug discovery and design, drug therapy |
| LS7_4 | Analgesia and Surgery |
| LS7_5 | Toxicology |
| LS7_6 | Gene therapy, cell therapy, regenerative medicine |
| LS7_7 | Radiation therapy |
| LS7_8 | Health services, health care research |

| LS7_9 | Public health and epidemiology |
| LS7_10 | Environment and health risks, occupational medicine |
| LS7_11 | Medical ethics |

## LS8 Evolutionary, Population and Environmental Biology: Evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, ecotoxicology, microbial ecology

| LS8_1 | Ecology (theoretical and experimental; population, species and community level) |
| LS8_2 | Population biology, population dynamics, population genetics |
| LS8_3 | Systems evolution, biological adaptation, phylogenetics, systematics, comparative biology |
| LS8_4 | Biodiversity, conservation biology, conservation genetics, invasion biology |
| LS8_5 | Evolutionary biology: evolutionary ecology and genetics, co-evolution |
| LS8_6 | Biogeography, macro-ecology |
| LS8_7 | Animal behaviour |
| LS8_8 | Environmental and marine biology |
| LS8_9 | Environmental toxicology at the population and ecosystems level |
| LS8_10 | Microbial ecology and evolution |
| LS8_11 | Species interactions (e.g. food-webs, symbiosis, parasitism, mutualism) |

## LS9 Applied Life Sciences and Non-Medical Biotechnology: Applied plant and animal sciences; food sciences; forestry; industrial, environmental and non-medical biotechnologies, bioengineering; synthetic and chemical biology; biomimetics; bioremediation

| LS9_1 | Non-medical biotechnology and genetic engineering (including transgenic organisms, recombinant proteins, biosensors, bioreactors, microbiology) |
| LS9_2 | Synthetic biology, chemical biology and bio-engineering |
| LS9_3 | Animal sciences (including animal husbandry, aquaculture, fisheries, animal welfare) |
| LS9_4 | Plant sciences (including crop production, plant breeding, agroecology, soil biology) |
| LS9_5 | Food sciences (including food technology, nutrition) |
| LS9_6 | Forestry and biomass production (including biofuels) |
| LS9_7 | Environmental biotechnology (including bioremediation, biodegradation) |
| LS9_8 | Biomimetics |
| LS9_9 | Biohazards (including biological containment, biosafety, biosecurity) |