Panel structure for ERC calls 2021 and 2022
(revised)

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** Mathematical statistics
- **PE1_15** Generic statistical methodology and modelling
- **PE1_16** Discrete mathematics and combinatorics
- **PE1_17** Mathematical aspects of computer science
- **PE1_18** Numerical analysis
- **PE1_19** Scientific computing and data processing
- **PE1_20** Control theory, optimisation and operational research
- **PE1_21** Application of mathematics in sciences
- **PE1_22** Application of mathematics in industry and society

**PE2**  Fundamental Constituents of Matter
Particle, nuclear, plasma, atomic, molecular, gas, and optical physics

- **PE2_1** Theory of fundamental interactions
- **PE2_2** Phenomenology of fundamental interactions
- **PE2_3** Experimental particle physics with accelerators
- **PE2_4** Experimental particle physics without accelerators
- **PE2_5** Classical and quantum physics of gravitational interactions
- **PE2_6** Nuclear, hadron and heavy ion physics
- **PE2_7** Nuclear and particle astrophysics
- **PE2_8** Gas and plasma physics
- **PE2_9** Electromagnetism
- **PE2_10** Atomic, molecular physics
- **PE2_11** Ultra-cold atoms and molecules
- **PE2_12** Optics, non-linear optics and nano-optics
- **PE2_13** Quantum optics and quantum information
- **PE2_14** Lasers, ultra-short lasers and laser physics
- **PE2_15** Thermodynamics
- **PE2_16** Non-linear physics
- **PE2_17** Metrology and measurement
- **PE2_18** Equilibrium and non-equilibrium statistical mechanics: steady states and dynamics
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
- **PE3_5** Physical properties of semiconductors and insulators
- **PE3_6** Macroscopic quantum phenomena, e.g. superconductivity, superfluidity, quantum Hall effect
- **PE3_7** Spintronics
- **PE3_8** Magnetism and strongly correlated systems
- **PE3_9** Condensed matter – beam interactions (photons, electrons, etc.)
- **PE3_10** Nanophysics, e.g. nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics
- **PE3_11** Mesoscopic quantum physics and solid-state quantum technologies
- **PE3_12** Molecular electronics
- **PE3_13** Structure and dynamics of disordered systems, e.g. soft matter (gels, colloids, liquid crystals), granular matter, liquids, glasses, defects
- **PE3_14** Fluid dynamics (physics)
- **PE3_15** Statistical physics: phase transitions, condensed matter systems, models of complex systems, interdisciplinary applications
- **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**  
New materials and new synthetic approaches, structure-properties relations, solid state chemistry, molecular architecture, organic chemistry

- **PE5_1** Structural properties of materials
- **PE5_2** Solid state materials chemistry
- **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 synthesis
Intelligent materials synthesis – self assembled materials

Coordination chemistry

Colloid chemistry

Biological chemistry and chemical biology

Chemistry of condensed matter

Homogeneous catalysis

Macromolecular chemistry

Polymer chemistry

Supramolecular chemistry

Organic chemistry

Medicinal chemistry

Computer architecture, embedded systems, operating systems

Distributed systems, parallel computing, sensor networks, cyber-physical systems

Software engineering, programming languages and systems

Theoretical computer science, formal methods, automata

Security, privacy, cryptology, quantum cryptography

Algorithms and complexity, distributed, parallel and network algorithms, algorithmic game theory

Artificial intelligence, intelligent systems, natural language processing

Computer graphics, computer vision, multimedia, computer games

Human computer interaction and interface, visualisation

Web and information systems, data management systems, information retrieval and digital libraries, data fusion

Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)

Scientific computing, simulation and modelling tools

Bioinformatics, bio-inspired computing, and natural computing

Quantum computing (formal methods, algorithms and other computer science aspects)

Control engineering

Electrical engineering: power components and/or systems

Simulation engineering and modelling

(Micro- and nano-) systems engineering

(Micro- and nano-) electronic, optoelectronic and photonic components

Communication systems, wireless technology, high-frequency technology

Signal processing

Networks, e.g. communication networks and nodes, Internet of Things, sensor networks, networks of robots

Man-machine interfaces

Robotics

Components and systems for applications (in e.g. medicine, biology, environment)

Electrical energy production, distribution, applications
**PE8  Products and Processes Engineering**
Product and process design, chemical, civil, environmental, mechanical, vehicle engineering, energy processes and relevant computational methods

PE8_1  Aerospace engineering
PE8_2  Chemical engineering, technical chemistry
PE8_3  Civil engineering, architecture, offshore construction, lightweight construction, geotechnics
PE8_4  Computational engineering
PE8_5  Fluid mechanics
PE8_6  Energy processes engineering
PE8_7  Mechanical engineering
PE8_8  Propulsion engineering, e.g. hydraulic, turbo, piston, hybrid engines
PE8_9  Production technology, process engineering
PE8_10  Manufacturing engineering and industrial design
PE8_11  Environmental engineering, e.g. sustainable design, waste and water treatment, recycling, regeneration or recovery of compounds, carbon capture & storage
PE8_12  Naval/marine engineering
PE8_13  Industrial bioengineering
PE8_14  Automotive and rail engineering; multi-/inter-modal transport engineering

**PE9  Universe Sciences**
Astro-physics/-chemistry/-biology; solar system; planetary systems; stellar, galactic and extragalactic astronomy; cosmology; space sciences; astronomical instrumentation and data

PE9_1  Solar physics – the Sun and the heliosphere
PE9_2  Solar system science
PE9_3  Exoplanetary science, formation and characterization of extrasolar planets
PE9_4  Astrobiology
PE9_5  Interstellar medium and star formation
PE9_6  Stars – stellar physics, stellar systems
PE9_7  The Milky Way
PE9_8  Galaxies – formation, evolution, clusters
PE9_9  Cosmology and large-scale structure, dark matter, dark energy
PE9_10  Relativistic astrophysics and compact objects
PE9_11  Gravitational wave astronomy
PE9_12  High-energy and particle astronomy
PE9_13  Astronomical instrumentation and data, e.g. telescopes, detectors, techniques, archives, analyses
**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  
PE10_19 Planetary geology and geophysics  
PE10_20 Geohazards  
PE10_21 Earth system modelling and interactions

**PE11**  **Materials Engineering**  
Advanced materials development: performance enhancement, modelling, large-scale preparation, modification, tailoring, optimisation, novel and combined use of materials, etc.

PE11_1 Engineering of biomaterials, biomimetic, bioinspired and bio-enabled materials  
PE11_2 Engineering of metals and alloys  
PE11_3 Engineering of ceramics and glasses  
PE11_4 Engineering of polymers and plastics  
PE11_5 Engineering of composites and hybrid materials  
PE11_6 Engineering of carbon materials  
PE11_7 Engineering of metal oxides  
PE11_8 Engineering of alternative established or emergent materials  
PE11_9 Nanomaterials engineering, e.g. nanoparticles, nanoporous materials, 1D & 2D nanomaterials  
PE11_10 Soft materials engineering, e.g. gels, foams, colloids  
PE11_11 Porous materials engineering, e.g. covalent-organic, metal-organic, porous aromatic frameworks  
PE11_12 Semi-conducting and magnetic materials engineering  
PE11_13 Metamaterials engineering  
PE11_14 Computational methods for materials engineering
Life Sciences

**LS1**  
**Molecules of Life: Biological Mechanisms, Structures and Functions**

*For all organisms:*
Molecular biology, biochemistry, structural biology, molecular biophysics, synthetic and chemical biology, drug design, innovative methods and modelling

**LS1_1** Macromolecular complexes including interactions involving nucleic acids, proteins, lipids and carbohydrates

**LS1_2** Biochemistry

**LS1_3** DNA and RNA biology

**LS1_4** Protein biology

**LS1_5** Lipid biology

**LS1_6** Glycobiology

**LS1_7** Molecular biophysics, biomechanics, bioenergetics

**LS1_8** Structural biology

**LS1_9** Molecular mechanisms of signalling processes

**LS1_10** Synthetic biology

**LS1_11** Chemical biology

**LS1_12** Protein design

**LS1_13** Early translational research and drug design

**LS1_14** Innovative methods and modelling in molecular, structural and synthetic biology

**LS2**  
**Integrative Biology: from Genes and Genomes to Systems**

*For all organisms:*
Genetics, epigenetics, genomics and other ‘omics studies, bioinformatics, systems biology, genetic diseases, gene editing, innovative methods and modelling, ‘omics for personalised medicine

**LS2_1** Genetics

**LS2_2** Gene editing

**LS2_3** Epigenetics

**LS2_4** Gene regulation

**LS2_5** Genomics

**LS2_6** Metagenomics

**LS2_7** Transcriptomics

**LS2_8** Proteomics

**LS2_9** Metabolomics

**LS2_10** Glycomics/Lipidomics

**LS2_11** Bioinformatics and computational biology

**LS2_12** Biostatistics

**LS2_13** Systems biology

**LS2_14** Genetic diseases

**LS2_15** Integrative biology for personalised medicine

**LS2_16** Innovative methods and modelling in integrative biology
LS3  Cellular, Developmental and Regenerative Biology

For all organisms:
Structure and function of the cell, cell-cell communication, embryogenesis, tissue differentiation, organogenesis, growth, development, evolution of development, organoids, stem cells, regeneration, therapeutic approaches

LS3_1  Cell cycle, cell division and growth
LS3_2  Cell senescence, cell death, autophagy, cell ageing
LS3_3  Cell behaviour, including control of cell shape, cell migration
LS3_4  Cell junctions, cell adhesion, the extracellular matrix, cell communication
LS3_5  Cell signalling and signal transduction, exosome biology
LS3_6  Organelle biology and trafficking
LS3_7  Mechanobiology of cells, tissues and organs
LS3_8  Embryogenesis, pattern formation, morphogenesis
LS3_9  Cell differentiation, formation of tissues and organs
LS3_10 Developmental genetics
LS3_11 Evolution of developmental strategies
LS3_12 Organoids
LS3_13 Stem cells
LS3_14 Regeneration
LS3_15 Development of cell-based therapeutic approaches for tissue regeneration
LS3_16 Functional imaging of cells and tissues
LS3_17 Theoretical modelling in cellular, developmental and regenerative biology

LS4  Physiology in Health, Disease and Ageing
Organ and tissue physiology, comparative physiology, physiology of ageing, pathophysiology, inter-organ and tissue communication, endocrinology, nutrition, metabolism, interaction with the microbiome, non-communicable diseases including cancer (and except disorders of the nervous system and immunity-related diseases)

LS4_1  Organ and tissue physiology and pathophysiology
LS4_2  Comparative physiology
LS4_3  Physiology of ageing
LS4_4  Endocrinology
LS4_5  Non-hormonal mechanisms of inter-organ and tissue communication
LS4_6  Microbiome and host physiology
LS4_7  Nutrition and exercise physiology
LS4_8  Impact of stress (including environmental stress) on physiology
LS4_9  Metabolism and metabolic disorders, including diabetes and obesity
LS4_10 The cardiovascular system and cardiovascular diseases
LS4_11 Haematopoiesis and blood diseases
LS4_12 Cancer
LS4_13 Other non-communicable diseases (except disorders of the nervous system and immunity-related diseases)
LS5  Neuroscience and Disorders of the Nervous System
Nervous system development, homeostasis and ageing, nervous system function and dysfunction, systems neuroscience and modelling, biological basis of cognitive processes and of behaviour, neurological and mental disorders

LS5_1  Neuronal cells
LS5_2  Glial cells and neuronal-glial communication
LS5_3  Neural development and related disorders
LS5_4  Neural stem cells
LS5_5  Neural networks and plasticity
LS5_6  Neurovascular biology and blood-brain barrier
LS5_7  Sensory systems, sensation and perception, including pain
LS5_8  Neural basis of behaviour
LS5_9  Neural basis of cognition
LS5_10  Ageing of the nervous system
LS5_11  Neurological and neurodegenerative disorders
LS5_12  Mental disorders
LS5_13  Nervous system injuries and trauma, stroke
LS5_14  Repair and regeneration of the nervous system
LS5_15  Neuroimmunology, neuroinflammation
LS5_16  Systems and computational neuroscience
LS5_17  Imaging in neuroscience
LS5_18  Innovative methods and tools for neuroscience

LS6  Immunity, Infection and Immunotherapy
The immune system, related disorders and their mechanisms, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases, innovative immunological tools and approaches, including therapies

LS6_1  Innate immunity
LS6_2  Adaptive immunity
LS6_3  Regulation of the immune response
LS6_4  Immune-related diseases
LS6_5  Biology of pathogens (e.g. bacteria, viruses, parasites, fungi)
LS6_6  Infectious diseases
LS6_7  Mechanisms of infection
LS6_8  Biological basis of prevention and treatment of infection
LS6_9  Antimicrobials, antimicrobial resistance
LS6_10  Vaccine development
LS6_11  Innovative immunological tools and approaches, including therapies

LS7  Prevention, Diagnosis and Treatment of Human Diseases
Medical technologies and tools for prevention, diagnosis and treatment of human diseases, therapeutic approaches and interventions, pharmacology, preventative medicine, epidemiology and public health, digital medicine

LS7_1  Medical imaging for prevention, diagnosis and monitoring of diseases
LS7_2  Medical technologies and tools (including genetic tools and biomarkers) for prevention, diagnosis, monitoring and treatment of diseases
LS7_3  Nanomedicine
LS7_4  Regenerative medicine
LS7_5  Applied gene, cell and immune therapies
LS7_6  Other medical therapeutic interventions, including transplantation
LS7_7  Pharmacology and toxicology
LS7_8  Effectiveness of interventions, including resistance to therapies
LS7_9  Public health and epidemiology
LS7_10 Preventative and prognostic medicine
LS7_11 Environmental health, occupational medicine
LS7_12 Health care, including care for the ageing population
LS7_13 Palliative medicine
LS7_14 Digital medicine, e-medicine, medical applications of artificial intelligence
LS7_15 Medical ethics

**LS8  Environmental Biology, Ecology and Evolution**

*For all organisms:*
Ecology, biodiversity, environmental change, evolutionary biology, behavioural ecology, microbial ecology, marine biology, ecophysiology, theoretical developments and modelling

LS8_1 Ecosystem and community ecology, macroecology
LS8_2 Biodiversity
LS8_3 Conservation biology
LS8_4 Population biology, population dynamics, population genetics
LS8_5 Biological aspects of environmental change, including climate change
LS8_6 Evolutionary ecology
LS8_7 Evolutionary genetics
LS8_8 Phylogenetics, systematics, comparative biology
LS8_9 Macroevolution and paleobiology
LS8_10 Ecology and evolution of species interactions
LS8_11 Behavioural ecology and evolution
LS8_12 Microbial ecology and evolution
LS8_13 Marine biology and ecology
LS8_14 Ecophysiology, from organisms to ecosystems
LS8_15 Theoretical developments and modelling in environmental biology, ecology, and evolution

**LS9  Biotechnology and Biosystems Engineering**

Biotechnology using all organisms, biotechnology for environment and food applications, applied plant and animal sciences, bioengineering and synthetic biology, biomass and biofuels, biohazards

LS9_1 Bioengineering for synthetic and chemical biology
LS9_2 Applied genetics, gene editing and transgenic organisms
LS9_3 Bioengineering of cells, tissues, organs and organisms
LS9_4 Microbial biotechnology and bioengineering
LS9_5 Food biotechnology and bioengineering
LS9_6 Marine biotechnology and bioengineering
LS9_7 Environmental biotechnology and bioengineering
LS9_8 Applied plant sciences, plant breeding, agroecology and soil biology
LS9_9 Plant pathology and pest resistance
LS9_10 Veterinary and applied animal sciences
LS9_11 Biomass production and utilisation, biofuels
LS9_12 Ecotoxicology, biohazards and biosafety
Social Sciences and Humanities

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

- **SH1_1**  Macroeconomics; monetary economics; economic growth
- **SH1_2**  International trade; international management; international business; spatial economics
- **SH1_3**  Development economics; structural change; political economy of development
- **SH1_4**  Finance; asset pricing; international finance; market microstructure
- **SH1_5**  Corporate finance; banking and financial intermediation; accounting; auditing; insurance
- **SH1_6**  Econometrics; operations research
- **SH1_7**  Behavioural economics; experimental economics; neuro-economics
- **SH1_8**  Microeconomic theory; game theory; decision theory
- **SH1_9**  Industrial organisation; entrepreneurship; R&D and innovation
- **SH1_10**  Management; strategy; organisational behaviour
- **SH1_11**  Human resource management; operations management, marketing
- **SH1_12**  Environmental economics; resource and energy economics; agricultural economics
- **SH1_13**  Labour and demographic economics
- **SH1_14**  Health economics; economics of education
- **SH1_15**  Public economics; political economics; law and economics
- **SH1_16**  Historical economics; quantitative economic history; institutional economics; economic systems

**SH2**  Institutions, Governance and Legal Systems
Political science, international relations, law

- **SH2_1**  Political systems, governance
- **SH2_2**  Democratisation and social movements
- **SH2_3**  Conflict resolution, war, peace building, international law
- **SH2_4**  Legal studies, constitutions, human rights, comparative law
- **SH2_5**  International relations, global and transnational governance
- **SH2_6**  Humanitarian assistance and development
- **SH2_7**  Political and legal philosophy
- **SH2_8**  Big data in political and legal studies

**SH3**  The Social World and Its Diversity
Sociology, social psychology, social anthropology, education sciences, communication studies

- **SH3_1**  Social structure, social mobility, social innovation
- **SH3_2**  Inequalities, discrimination, prejudice
- **SH3_3**  Aggression and violence, antisocial behaviour, crime
- **SH3_4**  Social integration, exclusion, prosocial behaviour
- **SH3_5**  Attitudes and beliefs
- **SH3_6**  Social influence; power and group behaviour
- **SH3_7**  Kinship; diversity and identities, gender, interethnic relations
- **SH3_8**  Social policies, welfare, work and employment
- **SH3_9**  Poverty and poverty alleviation
- **SH3_10**  Religious studies, ritual; symbolic representation
- **SH3_11**  Social aspects of teaching and learning, curriculum studies, education and educational policies
- **SH3_12**  Communication and information, networks, media
- **SH3_13**  Digital social research
- **SH3_14**  Social studies of science and technology

**SH4**  The Human Mind and Its Complexity
Cognitive science, psychology, linguistics, theoretical philosophy

- **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
Literary studies, 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; text and image studies
SH5_4  Visual and performing arts, film, design and architecture
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 and its applications; social 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, social archaeology
SH6_3  General archaeology, archaeometry, landscape archaeology
SH6_4  Prehistory, palaeoanthropology, palaeodemography, protohistory, bioarchaeology
SH6_5  Palaeography and codicology
SH6_6  Ancient history
SH6_7  Medieval history
SH6_8  Early modern history
SH6_9  Modern and contemporary history
SH6_10 Colonial and post-colonial history
SH6_11 Global history, transnational history, comparative history, entangled histories
SH6_12 Social and economic history
SH6_13 Gender history, cultural history, history of collective identities and memories, history of religions
SH6_14 History of ideas, intellectual history, history of economic thought
SH6_15 History of science, medicine and technologies

SH7  Human Mobility, Environment, and Space
Human geography, demography, health, sustainability science, territorial planning, spatial analysis

SH7_1  Human, economic and social geography
SH7_2  Migration
SH7_3  Population dynamics: households, family and fertility
SH7_4  Social aspects of health, ageing and society
SH7_5  Sustainability sciences, environment and resources
SH7_6  Environmental and climate change, societal impact and policy
SH7_7 Cities; urban, regional and rural studies
SH7_8 Land use and planning
SH7_9 Energy, transportation and mobility
SH7_10 GIS, spatial analysis; big data in geographical studies