

## **Agriculture / Rural Development / Fisheries**

Agronomy  
Animal and Dairy science  
Aquaculture  
Aquatic biology, Hydrobiology  
Fishery  
Forestry  
Horticulture, viticulture  
Husbandry  
Paper and wood  
Plant breeding and plant protection  
Precision agriculture  
Soil management

## **Biotechnology**

Biochemistry  
Bacteriology  
Bioeconomy  
Biohazards, biological containment, biosafety, biosecurity  
Bioinformatics  
Bioproducts (products that are manufactured using biological material as feedstock) biomaterials, bioplastics, biofuels, bioderived bulk and fine chemicals, bio-derived novel materials  
Bioremediation, biodegradation  
Biotechnology (non-medical), bioreactors, applied microbiology  
DNA synthesis, modification, repair, recombination, degradation  
Genetics and heredity  
Human biology  
Microbiology  
Neurochemistry and neuropharmacology  
Plant sciences, botany  
Reproductive biology  
Serology  
Tissue culture  
Zoology  
Bioprocessing technologies (industrial processes relying on biological agents to drive the process) biocatalysis, fermentation

## **Construction, Civil engineering, Infrastructures**

Glass, ceramics & construction material  
Architecture, smart buildings, smart cities, urban engineering  
Civil engineering, maritime/hydraulic engineering, geotechnics, waste treatment  
Construction engineering, Municipal and structural engineering  
Low/nearly zero &-energy positive buildings  
Urban studies (Planning and development)

## **Consumer products and services**

Distribution and logistics  
Electronic commerce (eCommerce)  
Household products  
Leisure products  
Leisure services  
Personal products and services  
Retail, wholesale or distribution  
Service innovation  
Supply chain management  
Textiles, apparel and luxury goods  
Tourism / Travel

## **Earth and related environmental sciences**

Environmental protection  
Aquaculture  
Atmospheric chemistry, atmospheric composition, air pollution  
Circular economy  
Climatology and climate change  
Decontamination and de-pollution  
Ecology  
Environmental and Green Technologies  
Flood forecasting  
Geographical information systems, cartography  
Geo-information and spatial data analysis  
Geology, tectonics, volcanology  
Hydrology  
Marine biology  
Marine ecosystems and processes  
Meteorology  
Mineralogy  
Natural resources exploration and exploitation  
Waste management  
Waste recycling  
Wastewater treatment  
Water

## **Education and Culture**

Education  
Psychology  
Social Media  
Arts (arts, history of arts, performing arts, music)  
Behavioural change  
Cultural heritage, cultural memory  
Design innovation  
Informal education  
Innovation and diversity (e.g. gender)  
Languages and Literature  
Life long learning  
Media and communications  
Social issues  
Teaching materials

## Energy

Biodiesel  
Bioenergy  
Biofuels  
Biogas  
Biomass  
Biomethane  
Domestic appliances  
Electricity Transmission/Distribution  
Electrochemistry, batteries and fuel cells  
Energy Economics  
Energy Efficiency  
Energy management  
Energy systems (production, distribution, application)  
Energy systems, smart energy, smart grids, wireless energy transfer  
Fuel Production & Distribution  
Hydrogen  
Low/zero carbon communities  
Natural gas  
Photovoltaics  
Renewable energy sources  
Solar cooling  
Solar Thermal

## Engineering and technology

Manufacturing and processing  
Acoustics  
Audio engineering, reliability analysis  
Automation and control systems  
Chemical engineering, technical chemistry  
Communication engineering and systems telecommunications  
Control engineering  
Electrical and electronic engineering  
Electromagnetism  
Electromechanical engineering  
Electronics, photonics  
Graphene, layered material  
Industrial bioengineering  
Materials engineering  
Mechanical engineering  
Metallurgy  
Metrology and measurement  
Micro (system) engineering  
Nanotechnology, nano-materials, nano engineering  
Novel Materials  
Ocean engineering  
Optics (including laser optics and quantum optics)  
Organic electronics  
Photonics  
Porous Materials  
Production technology, process engineering  
Propulsion systems engineering  
Robotics  
Semiconductors  
Solid state materials  
Superconductivity  
Thermodynamics

## Food and beverages

Agricultural products  
Brewers  
Distillers and vintners  
Food additives  
Food contamination  
Food packaging  
Food preservation  
Food quality  
Food safety  
Food storage  
Food technology  
Secure food chain and wealth products  
Soft drinks

## Health

Ageing  
Biomarkers  
Cardiac and Cardiovascular systems  
Clinical medicine  
Critical care medicine and Emergency medicine  
Dentistry, oral surgery and medicine  
Dermatology and venereal diseases  
Diagnostic tools (e.g. genetic, imaging)  
Drugs  
eHealth  
Endocrinology and metabolism (including diabetes, hormones)  
Gene therapy  
Geriatrics and gerontology  
Healthcare system  
Health-related biotechnology  
Human genetics  
Immunology  
Infectious diseases  
Medical devices  
Neurodegenerative disorders  
Obstetrics and gynaecology  
Oncology  
Ophthalmology  
Orthopaedics  
Paediatrics  
Pathology  
Patient care  
Personalised treatment  
Pharmacology and pharmacy  
Psychiatry  
Radiology, nuclear medicine and medical imaging  
Rehabilitation  
Respiratory systems  
Rheumatology  
Robotics for healthcare  
Surgery  
Toxicology  
Transplantation  
Urology and nephrology  
Vaccines  
Virology  
Wellbeing

## Information and Communication Technology (ICT)

Artificial intelligence  
Blockchain and Distributed Ledger Technology (DLT)  
Internet of Things, embedded systems, pervasive systems  
Big data  
Extended Reality (XR)  
Advanced computing  
Algorithms and complexity  
BTT5 unmanned aircraft (Drone)  
Cloud computing  
Communication networks, media, information society  
Communication technology, high-frequency technology  
Computational engineering  
Computer graphics  
Computer hardware and architecture  
Computer sciences, information science and bioinformatics  
Cryptography, security, privacy, quantum crypto  
Cyber-physical systems  
Cybersecurity  
Data protection and privacy  
Digital games, gamification, applied games, serious games  
Digital services  
E-learning, user modelling, collaborative systems  
Fifth generation cellular network technology (5G)  
Fintech (Financial technology)  
Human computer interaction and interface, visualization and natural language processing  
Interaction, Multimodal, Brain-Computer-Interfaces, Assistive Technologies  
Internet Services & Applications

Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)  
Networks (communication networks, sensor networks, networks of robots, etc.)  
Neuroimaging and computational neuroscience  
Ontologies, neural networks, genetic programming, fuzzy logic  
Scientific computing, simulation and modelling tools  
Software engineering, operating systems, computer languages  
Web and information systems, database systems, information retrieval and digital libraries, data fusion

## Public sector innovation

Business model innovation  
Corporate Social responsibility  
Human resource management  
Open data  
Open innovation  
Public administration innovation  
Social innovation

## Security

Chemical, Biological, Radiological and Nuclear (CBRN) protection and decontamination equipment  
Crisis management  
Critical infrastructure, emergency systems, security, safety engineering  
Detection technology  
Explosives removal  
Forensic technologies, others  
Identification  
Information Security Technologies  
Interoperable secured communications (Security systems architecture)  
Navigation, guidance, control and tracking  
Networks and information security systems  
Protection  
Risk management  
Search and detection  
Surveillance

## Space

Earth Observation / Services and applications  
Flight Dynamics / Position, Navigation, and Timing  
Global Satellite Navigation System (GNSS) / Services & Applications  
Instrumentation - telescopes, detectors and techniques  
Launchers  
On-Board Data Systems  
Orbital transportation and re-entry systems  
Remote sensing  
RF Payload and Systems  
Satellites and Probes  
Space data exploitation  
Space Debris  
Space services and products  
Spacecraft  
Supporting Propulsion Technologies and Tools  
Telecommunications

## Transport & Mobility

Aircraft Avionics, Systems & Equipment AVS  
Airports APT  
Automation  
Automotive  
Logistics  
Maritime and infrastructure  
Maritime transport  
Multimodality  
Network infrastructures  
Propulsion PRO  
Rail infrastructure  
Rail Transport  
Road infrastructure  
Road transport  
Sea vessels  
Sustainable transport  
Transport Aviation / Air traffic management (ATM)  
Transport engineering  
Urban transport  
Vehicle Technology / Mobility