Intel ISEF Categories and Subcategories

The categories have been established with the goal of better aligning judges and student projects for the judging at the Intel ISEF. Local, regional, state and country fairs may or may not choose to use these categories, dependent on the needs of their area. Please check with your affiliated fair(s) for the appropriate category listings at that level of competition.

Please visit our website at **student.societyforscience.org/intel-isef-categories-and-subcategories** for a full description and definition of the Intel ISEF categories:

ANIMAL SCIENCES
Animal Behavior
Cellular Studies
Development
Ecology
Genetics
Nutrition and Growth
Physiology
Systematics and Evolution
Other

BEHAVIORAL AND SOCIAL SCIENCES
Clinical and Developmental Psychology
Cognitive Psychology
Neuroscience
Physiological Psychology
Sociology and Social Psychology
Other

BIOCHEMISTRY
Analytical Biochemistry
General Biochemistry
Medical Biochemistry
Structural Biochemistry
Other

BIOMEDICAL AND HEALTH SCIENCES
Cell, Organ, and Systems Physiology
Genetics and Molecular Biology of Disease
Immunology
Nutrition and Natural Products
Pathophysiology
Other

BIOMEDICAL ENGINEERING
Biomaterials and Regenerative Medicine
Biomechanics
Biomedical Devices
Biomedical Imaging
Cell and Tissue Engineering
Synthetic Biology
Other

CELLULAR AND MOLECULAR BIOLOGY
Cell Physiology
Cellular Immunology
Genetics
Molecular Biology
Neurobiology
Other

CHEMISTRY
Analytical Chemistry
Computational Chemistry
Environmental Chemistry
Inorganic Chemistry
Materials Chemistry
Organic Chemistry
Physical Chemistry
Other

COMPUTATIONAL BIOLOGY AND BIOINFORMATICS
Computational Biomodeling
Computational Epidemiology
Computational Evolutionary Biology
Computational Neuroscience
Computational Pharmacology
Genomics
Other

EARTH AND ENVIRONMENTAL SCIENCES
Atmospheric Science
Climate Science
Environmental Effects on Ecosystems
Geosciences
Water Science
Other

EMBEDDED SYSTEMS
Circuits
Internet of Things
Microcontrollers
Networking and Data Communications
Optics
Sensors
Signal Processing
Other

ENERGY: CHEMICAL
Alternative Fuels
Computational Energy Science
Fossil Fuel Energy
Fuel Cells and Battery Development
Microbial Fuel Cells
Solar Materials
Other

ENERGY: PHYSICAL
Hydro Power
Nuclear Power
Solar
Sustainable Design
Thermal Power
Wind
Other

ENGINEERING MECHANICS
Aerospace and Aeronautical Engineering
Civil Engineering
Computational Mechanics
Control Theory
Ground Vehicle Systems
Industrial Engineering-Processing
Mechanical Engineering
Naval Systems
Other

ENVIRONMENTAL ENGINEERING
Bioremediation
Land Reclamation
Pollution Control
Recycling and Waste Management
Water Resources Management
Other

MATERIALS SCIENCE
Biomaterials
Ceramic and Glasses
Composite Materials
Computation and Theory
Electronic, Optical and Magnetic Materials
Nanomaterials
Polymers
Other

MATHEMATICS
Algebra
Analysis
Combinatorics, Graph Theory, and Game Theory
Geometry and Topology
Number Theory
Probability and Statistics
Other

MICROBIOLOGY
Antimicrobials and Antibiotics
Applied Microbiology
Bacteriology
Environmental Microbiology
Microbial Genetics
Virology
Other

PHYSICS AND ASTRONOMY
Astronomy and Cosmology
Atomic, Molecular, and Optical Physics
Biological Physics
Condensed Matter and Materials
Mechanics
Nuclear and Particle Physics
Theoretical, Computational and Quantum Physics
Other

PLANT SCIENCES
Agriculture and Agronomy
Ecology
Genetics/Breeding
Growth and Development
Pathology
Plant Physiology
Systematics and Evolution
Other

ROBOTICS AND INTELLIGENT MACHINES
Biomechanics
Cognitive Systems
Control Theory
Machine Learning
Robot Kinematics
Other

SYSTEMS SOFTWARE
Algorithms
Cybersecurity
Databases
Human/Machine Interface
Languages and Operating Systems
Mobile Apps
Online Learning
Other

TRANSLATIONAL MEDICAL SCIENCES
Disease Detection and Diagnosis
Disease Prevention
Disease Treatment and Therapies
Drug Identification and Testing
Pre-Clinical Studies
Other