**NC Science and Engineering Fair Categories**

**Based on the 2015-2016 ISEF Categories and Subcategories**

<https://student.societyforscience.org/intel-isef-categories-and-subcategories>

**Biological Science A**

**Animal Sciences**

* Animal Behavior
* Cellular Studies
* Development
* Ecology
* Genetics
* Nutrition & Growth
* Physiology
* Systematics & Evolution

**Plant Sciences**

* Agronomy
* Ecology
* Genetics/Breeding
* Growth & Development
* Pathology
* Physiology
* Systematics & Evolution

**Microbiology**

* Antimicrobials & Antibiotiecs
* Applied Microbiology
* Bacteriology
* Environmental Microbiology
* Microbial Genetics
* Virology

**Chemistry**

**Biochemistry**

* Analytical biochemistry
* General Biochemistry
* Medicinal Biochemistry
* Structural Biochemistry

**Chemistry**

* Analytical Chemistry
* Computational Chemistry
* Environmental Chemistry
* Inorganic Chemistry
* Materials Chemistry
* Organic Chemistry
* Physical Chemistry

**Biological Science B**

**Cellular & Molecular Biology**

* Cell Physiology
* Genetics
* Immunology
* Molecular Biology
* Neurobiology

**Biomedical & Health Sciences**

* Disease Diagnosis
* Disease Treatment
* Drug Development & Testing
* Epidemiology
* Nutrition
* Physiology & Pathology

**Behavioral & Social Sciences**

* Clinical & Developmental
* Psychology
* Cognitive Psychology
* Physiological Psychology
* Sociology & Social Psychology

**Computational Biology & Bioinformatics**

* Computational Pharmacology
* Computational Biomodeling
* Computational Evolutionary Biology
* Genomics

**Earth and Environmental**

**Earth & Environmental Sciences**

* Atmospheric Science
* Climate Science
* Environmental Effects on Ecosystems
* Geosciences
* Water Science

**Environmental Engineering**

* Bioremediation
* Land Reclamation
* Pollution Control
* Recycling & Waste Management
* Water Resources Management

**Energy: Chemical**

* Alternative Fuels
* Computational Energy Science
* Fossil Fuel Energy
* Fuel Cells & Battery Development
* Microbial Fuel Cells
* Solar Materials

**Energy: Physical**

* Hydro Power
* Nuclear Power
* Solar
* Sustainable Design
* Thermal Power
* Wind

**Engineering**

**Computational Biology & Bioinformatics**

* Biomedical Engineering

**Engineering Mechanics**

* Aerospace & Aeronautical Engineering
* Civil Engineering
* Computational Mechanics
* Control Theory
* Ground Vehicle Systems
* Industrial Engineering-Processing
* Mechanical Engineering
* Naval Systems

**Material Science**

* Biomaterials
* Ceramic & Glasses
* Composite Materials
* Computation & Thery
* Electronic, Optical & Magnetic Materials
* Nanomaterials
* Polymers
* Electrical and Computer Engineering

**Physics & Mathematics**

**Physics & Astronomy**

* Astronomy & Cosmology
* Atomic, Molecular, & Optical Physics
* Biological Physics
* Computational Physics & Astrophysics
* Condensed Matter & Materials
* Instrumentation
* Magnetics, Electromagnetics & Plasmas
* Mechanics
* Nuclear & Particle Physics
* Optics, Lasers, Masers
* Quantum Computation
* Theoretical Physics

**Mathematics**

* Algebra
* Analysis
* Combinatorics, Graph Theory, & Game Theory
* Geometry & Topology
* Number Theory
* Probability & Statistics

**Technology**

**Embedded Systems**

* Circuits
* Internet of Things
* Microcontrollers
* Networking & Data Communications
* Optics
* Sensors
* Signal Processing

**Robotics & Intelligent Machines**

* Biomechanics
* Cognitive Systems
* Control Theory
* Machine Learning
* Robot Kinematics

**Systems Software**

* Algorithms
* Cybersecurity
* Databases
* Operating Systems
* Programming Languages