3.1 Research Programmes and Topics of Research

NGS encourages research – especially cross- and trans-disciplinary research – in engineering, information technology, physical sciences, and life and biomedical sciences.

The topics of research are listed as follows:
Bioinformatics
  • Computational Biology
  • Biological and Medical Sciences
  • Biocomputing
  • Computer Science
  • Control Engineering
  • Data Storage Technologies
  • Distributed Computing
  • Embedded Systems
  • High Performance Computing
  • Data Science
  • Genetic Algos
  • Machine Learning
  • Deep Learning
  • Decision Making
  • Biocomputing
  • Computational Biology
  • Biological and Medical Sciences
  • Biocomputing
  • Computer Science
  • Control Engineering
  • Data Storage Technologies
  • Distributed Computing
  • Embedded Systems
  • High Performance Computing
  • Data Science
  • Genetic Algos
  • Machine Learning
  • Deep Learning
  • Decision Making
  • Biocomputing
  • Computational Biology
  • Biological and Medical Sciences

Biological and Medical Sciences
  • Antioxidants
  • Biological Statistics
  • Cancer Research
  • Cardiovascular Biology
  • Cell and Molecular Biology
  • Developmental Biology
  • Drug Development
  • Immunology
  • Infectious Diseases
  • Inflammatory Diseases
  • Lipidomics
  • Metabolomics
  • Molecular Medicine
  • Molecular Epidemiology
  • Molecular Genetics
  • Molecular Toxicology
  • Neurobiology
  • Nutrition
  • Population Genetics
  • Proteomics
  • Stem Cell Biology
  • Structural & Chemical Biology
  • Systems Biology
  • Biomedical Engineering
  • Biomechanics
  • Biophysics
  • Biocomputing
  • Computational Biology
  • Biological and Medical Sciences

Biomedical Engineering
  • Bioengineering
  • Bioimaging
  • Biomechanics
  • Biophysics
  • Biocomputing
  • Computational Biology
  • Biological and Medical Sciences

Chemical and Biomolecular Engineering
  • Biochemistry
  • Biophysics
  • Biocomputing
  • Computational Biology
  • Biological and Medical Sciences

Computer Sciences
  • Computer Science
  • Control Engineering
  • Data Storage Technologies
  • Distributed Computing
  • Embedded Systems
  • High Performance Computing
  • Data Science
  • Genetic Algos
  • Machine Learning
  • Deep Learning
  • Decision Making
  • Biocomputing
  • Computational Biology

Environmental and Water Technologies
  • Environmental Science
  • Water Resources Engineering

Environmental Life Sciences Engineering
  • Environmental Science
  • Water Resources Engineering

Materials Science and Engineering
  • Materials Science
  • Nanomaterials

Mechanical and Electrical Engineering
  • Mechanical Engineering
  • Electrical Engineering

Medical Sciences
  • Medical Sciences

Molecular Sciences
  • Molecular Sciences

Neuroscience
  • Neuroscience

Micro and Nano Sciences
  • Micro and Nano Sciences

Physical Sciences
  • Physical Sciences

Physical Science
  • Physical Science

Physics
  • Physics

Physics
  • Physics

Systems Biology
  • Systems Biology

Nanomaterials
  • Nanomaterials

Nanomaterials
  • Nanomaterials

NGS encourages flexible thinking. Through courses and laboratory rotations early in the degree, students have the opportunities to acquire new knowledge, tools and skills pertinent and related to their PhD projects.

Please visit [http://ngs.nus.edu.sg/research_areas.html](http://ngs.nus.edu.sg/research_areas.html) for the most updated list.

In addition, we offer research specialisation via the following networked groups

1. Biological Imaging
2. Computational Biology
3. Data Science – under PhD (Data Science)
4. Environmental Life Sciences Engineering
5. Global Health Research and Technology
6. Interactive and Digital Media
7. Neuroscience – under Graduate Programme in Neuroscience
8. Mechanobiology – run independently by Mechanobiology Institute
9. Quantum Technologies – run independently by Centre for Quantum Technologies
