3.1 Research Programmes

NGS encourages research in or at the intersection of any of the following areas:

**Engineering:**
Biomolecular, Chemical, Computer, Electrical, Environmental, Manufacturing, Mechanical, Materials, Nanotechnology, Robotics

**Information Technology:**
Bioinformatics, Computational Biology, Data Mining, Infocommunications, Interactive and Digital Media

**Life Sciences:**
Biochemistry, Cancer Research, Cell and Molecular Biology, Developmental Biology, Genetics, Genomics, and Proteomics, Immunology, Lipidomics, Pharmacology, Physiology, Regenerative Medicine, Stem Cell Research, Structural Biology

**Physical Sciences:**
Biological Physics, Chemistry, Soft-condensed Matter Physics, Nonlinear Dynamics and Complex Systems, Nano- and Molecular Electronics, Photonics, Phononics, Thermoelectrics, Quantum Information and Quantum Computation


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

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


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.