CONNECTIONS WITH OVERSEAS INSTITUTES
» CERN
» University of Oxford
» Mullard Space Science Laboratory (UCL)
» Stanford University
» Lawrence Berkeley National Laboratory
» Space Science Laboratory

CONNECTION WITH LOCAL ORGANIZATIONS
» HK Observatory
» Science Museum
» Space Museum
» Secondary Schools
» Ho Koon Nature Education cum Astronomical Centre

PHD DESTINATIONS
» CalTech
» Harvard
» Brown
» Princeton
» UCLA
» Chicago
» Johns Hopkins
» Oxford
» Hamburg
» Cambridge
» Tokyo
» MIT
» Leiden
» Columbia
» McGill
» National Astronomical Observatory of Japan
» Max Planck Institute for Extraterrestrial Physics
» Max Planck Institute for Radio Astronomy
PHYSICS MAJOR ROADMAP

Skill Set Courses
Training on computer, mathematical modelling and problem-solving skills

Introductory Core Courses
(level-1 and 2 courses)
» Calculus-based physics courses
» Emphasis connection with daily-life
» Cover classical mechanics, electricity & magnetism, heat & thermodynamics and quantum physics

Advanced Core Courses
(level-3 and 4 courses)
» Core courses of higher abstraction
» Formal training in undergraduate physics
» Involve applications of advanced mathematical skills

Elective Courses
(level-3 and 4 courses)
» Courses to build expertise on specific topics
» Could be relevant to capstone projects
» Serve as preparation for postgraduate studies

ASTROPHYSICS THEME
Course list:
Astronomy Laboratory
Cosmology
Interstellar medium
Observational astronomy
Planetary science

COMPUTATIONAL PHYSICS THEME
Course list:
Computational Physics
Data Analysis & Modeling in Physics
Machine learning in Physics
Theoretical physics

EXPERIMENTAL PHYSICS THEME
Course list:
Atomic & Nuclear Physics
Laser & Spectroscopy Physics
Laboratory
Physical Optics
Solid State Physics

THEORETICAL PHYSICS THEME
Course list:
Adv. E&M
Adv. Quantum Mechanics
General Relativity
Particle physics
Theoretical physics

QR Code
Condensed Matter Theory Group

» Strongly correlated electron systems
» Theories for high temperature superconductor
» Spintronics and quantum transport
» Quantum computation
» Quantum magnetism

Experimental Condensed Matters & Material Physics Group

» Defects in semiconductors
» Nanomaterials
» Spintronics
» Optical properties in semiconductor nanostructures
» Organic, inorganic optoelectronic devices
» Ultrathin films, heterostructures of semiconductors, topological insulators
» Thin films and multilayer structures of advance functional materials
Research at HKU Physics

Astrophysics Group

» High energy theoretical astrophysics
» Interstellar chemistry, stellar evolution
» Stellar magnetic activities and winds
» Magnetars, pulsar wind nebulae, supernova remnants
» Gravitational lensing
» Star formation

Nuclear and Particle Physics Group

» Experimental nuclear physics at RIKEN, Japan
» Daya Bay Reactor Neutrino Experiment
» ATLAS experiment at Large Hadron Collider (LHC), CERN

Quantum Information Group

» Quantum information processing
» Quantum cryptography