NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

School of Physical and Mathematical Sciences
College of Science

Master of Science in

PRECISION SCIENTIFIC INSTRUMENTATION

UNLEASH YOUR POTENTIAL

With Specialisations in growth sectors such as **Chip Technology**, **Interdisciplinary Ai**, **Nano-photonics Technology** and **Quantum Communication Technology**

Upscale your knowledge

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Global demand for semiconductors continues to grow – The market is expected to reach US$1 trillion between 2030 – 2032.

Balanced curriculum with specialised learning

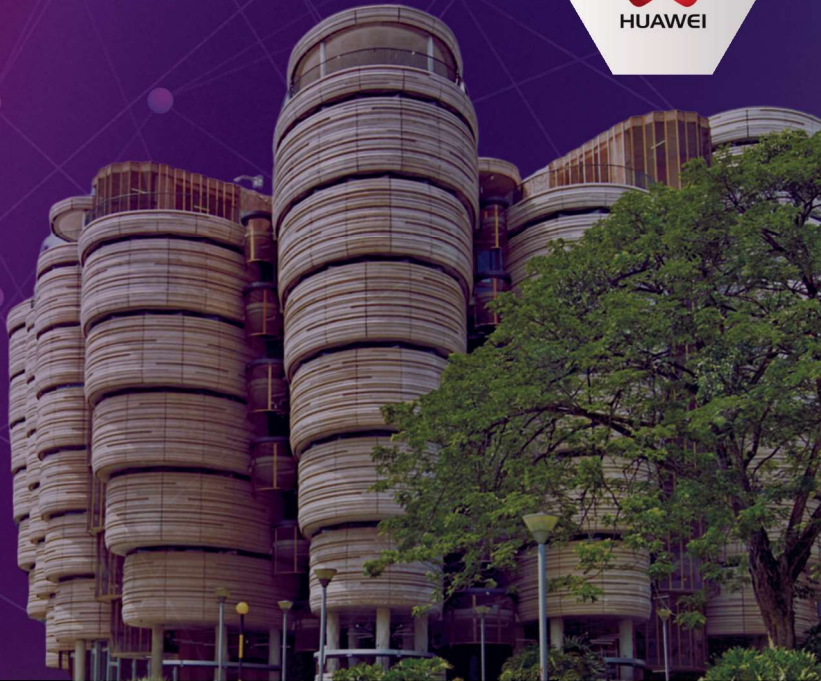
AY25/26 Total: 30 AU
Core Course: 3 AU
Prescribed Electives: 12 AU
Unrestricted Electives: 15 AU

Be Innovative

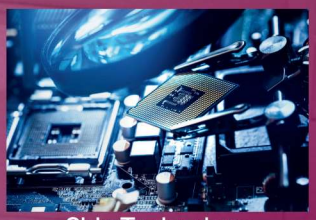
Access cutting-edge instruments and technologies in our state-ofthe-art PSI Master Lab, unlocking endless research opportunities.

Stay ahead of the curve

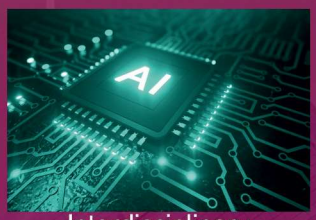
Access courses from NTU's MSc in Analytics (MSA) and MSc in Financial Technology (MSFT), blending expertise to expand your horizons.



SPECIALISATIONS & COURSES

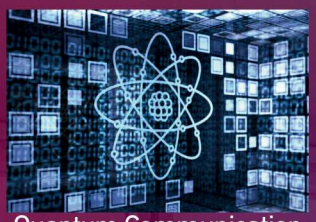


Chip Technology



Interdisciplinary Ai

Nano-photonics Technology



Quantum Communication Technology

CORE COURSES
PH6701 - Precision Instrumentation Laboratory

CHIP TECHNOLOGY
PRESCRIBED ELECTIVE COURSES
PH6747 - Magnetism & Spintronics Devices
PH6717 - Experimental Methodology in Solid State Physics
PH6730 - Advanced Techniques for Spectroscopic Research & Engineering
PH6739 - Digital Electronics

INTERDISCIPLINARY AI
PRESCRIBED ELECTIVE COURSES
PH6651 - Quantum Information and Quantum Computation
PH6723 - Computational Methods in Physics
PH6733 - Silicon Photonic Chip Technology
PH6725 - AI for Sciences

NANO-PHOTONICS TECHNOLOGY
PRESCRIBED ELECTIVE COURSES
PH6403 - Physics of Surfaces & Interfaces
PH6730 - Advanced Techniques for Spectroscopic Research & Engineering
PH6732 - Optoelectronic Technology
PH6404 - Physics of Low Dimensional Structures

*Prescribed Elective courses of one specialisation could be Unrestricted Elective courses of another specialisation.

QUANTUM COMMUNICATION TECHNOLOGY
PRESCRIBED ELECTIVE COURSES
PH6651 - Quantum Information and Quantum Computation
PH6652 - Quantum Devices for Quantum Communication & Sensing
PH6653 - Quantum Mysteries and Quantum Mechanics
PH6654 - Quantum Optics

UNRESTRICTED ELECTIVES
PRESCRIBED ELECTIVE COURSES
PH6760 - Scientific Communications
PH6718 - Graduate Professional Internship
PH6780 - Supervised Research Project
PH6711 - Applied Solid State Physics
PH6607 - Principles of Semiconductor Wafer Test & Measurement
PH6721 - Deep Learning with Python
PH6720 - Industry Immersion Internship (6 AU)
PH6788 - Advanced Research Mentorship (6 AU)
MH6301 - Information Retrieval & Analysis
MH6311 - Stochastic Processes for Data Science (1.5 AU)
MH6321 - Statistical Modelling & Data Analysis (1.5 AU
MH6351 - Web Analytics (1.5 AU)
MH6812 - Advanced Natural Language Processing with Deep Learning

Note: All courses are 3AU each unless otherwise specified.

ADMISSION REQUIREMENTS

A good Bachelor's Degree in a quantitative programme such as Physics engineering, materials science, etc.

A TOEFL score of 85 or an IELTS score of 6.0 for graduates from universities where English is not the medium of instruction.

Notes:
- On average, full-time students take 3-4 classes a week and part-time students take 1-2 classes a week.
- All courses are conducted at the NTU main campus in the evenings of weekdays or saturdays.

The requirements for graduation are:
- Successful completion of all requirements as prescribed by the programme of study; and
- Attainment of a minimum CGPA of 2.50 at the completion of the programme of study.

APPLICATION OPENS **NOW**

TILL 28 FEBRUARY 2025

For inquiries or further information, feel free to contact us at mspsi@ntu.edu.sg.