MASTER OF SCIENCE IN
PRECISION
SCIENTIFIC INSTRUMENTATION
Advanced scientific instrumentation, as an incubator of innovation, has demonstrated its tremendous potential to accelerate the revolution of manufacturing industry and to enhance the performance of products by employing innovations.

In particular, significant advances in science, engineering and technology based on precision scientific instrumentation are greatly enhancing the efficiency of information processing and storage. Hence, in Singapore, a budget of S$19 billion in the RIE2020 was allocated for R&D with a strong focus given to industry-oriented development projects.

Nanyang Technological University, Singapore (NTU Singapore) offers a Master of Science in Precision Scientific Instrumentation programme, hosted by the School of Physical and Mathematical Sciences. This Master programme will provide graduate students with robust training in the field of advanced instrumentation by incorporating coursework from multiple scientific and engineering disciplines. The curriculum is built upon solid-state physics, microelectronics, optoelectronics, charge- and spin-based materials with unique emphasises on the physics understanding of precision scientific instrumentation extensively used in advanced manufacturing industry, e.g. semiconductor, non-volatile memory, and photonics etc. The knowledge would help the students greatly with their scientific and technological innovations and navigation in the changing landscape of the high-tech industry.

### PROGRAMME OVERVIEW

The MSc in Precision Scientific Instrumentation (MSPSI) Programme is an intensive one-year full-time or two-year part-time programme by coursework taught in two semesters per year.

The programme consists a total of **32 Academic Units (AUs)**, with 20 AUs of compulsory modules and 12 AUs of elective courses.

### CURRICULUM STRUCTURE

**Compulsory Courses**

- Graduate Communications and Research Methodology (4AU)
- Applied Solid State Physics (4AU)
- Experimental Techniques in Condensed Matter Physics (4AU)
- Precision Instrumentation Laboratory (4AU)
- Optical Spectroscopic Techniques (4AU)

**Elective Courses**

- Advanced Optics (4AU)
- Spintronics for Information Technology (4AU)
- Advanced Numerical Methods for Physicists (4AU)
- Physics of Surfaces and Interfaces (4AU)
- Physics of Low Dimensional Structures (4AU)
- Solid-State Electronic Devices (4AU)
- Supervised Research Project (4 AU)
- Graduate Professional Internship (4AU)
**Programme Fee**

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
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</thead>
<tbody>
<tr>
<td>Singapore Citizens</td>
<td>S$25,000 + Prevailing GST</td>
</tr>
<tr>
<td>Singapore Permanent Residents</td>
<td>S$30,000 + Prevailing GST</td>
</tr>
<tr>
<td>International Students</td>
<td>S$40,000 + Prevailing GST</td>
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</tbody>
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All fees listed are in Singapore dollars (S$). Fees are reviewed yearly and subject to revision. Amounts quoted are exclusive of GST and subject to change.
## INSTALMENT SCHEDULE

<table>
<thead>
<tr>
<th>Payment Details</th>
<th>Due Date</th>
<th>Singapore Citizens</th>
<th>Singapore PR</th>
<th>International Students</th>
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<tbody>
<tr>
<td>Deposit (non-refundable)</td>
<td>Upon acceptance of offer</td>
<td>S$5,000 + Prevailing GST</td>
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<tr>
<td>First Payment</td>
<td>Year 1, start of Semester 1 (for all students)</td>
<td>S$12,500 + Prevailing GST</td>
<td>S$15,000 + Prevailing GST</td>
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<tr>
<td>Second Payment</td>
<td>Year 1, start of Semester 2 (for Full-Time students)</td>
<td>S$12,500 + Prevailing GST</td>
<td>S$15,000 + Prevailing GST</td>
<td>S$20,000 + Prevailing GST</td>
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<td></td>
<td>Year 2, start of Semester 1 (for Part-Time students)</td>
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The MSPSI programme is totally self-financed through fees collected. Service obligation option would not be extended to international students. Deposit will be used to offset first payment.

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**CONTACT US**

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