



NUS

National University
of Singapore

College of Humanities
and Sciences



**Join
NUS Physics
A Solid Start
to Setting Your
Future *in*
Motion**

**Bachelor of Science
(Honours) in
Physics**

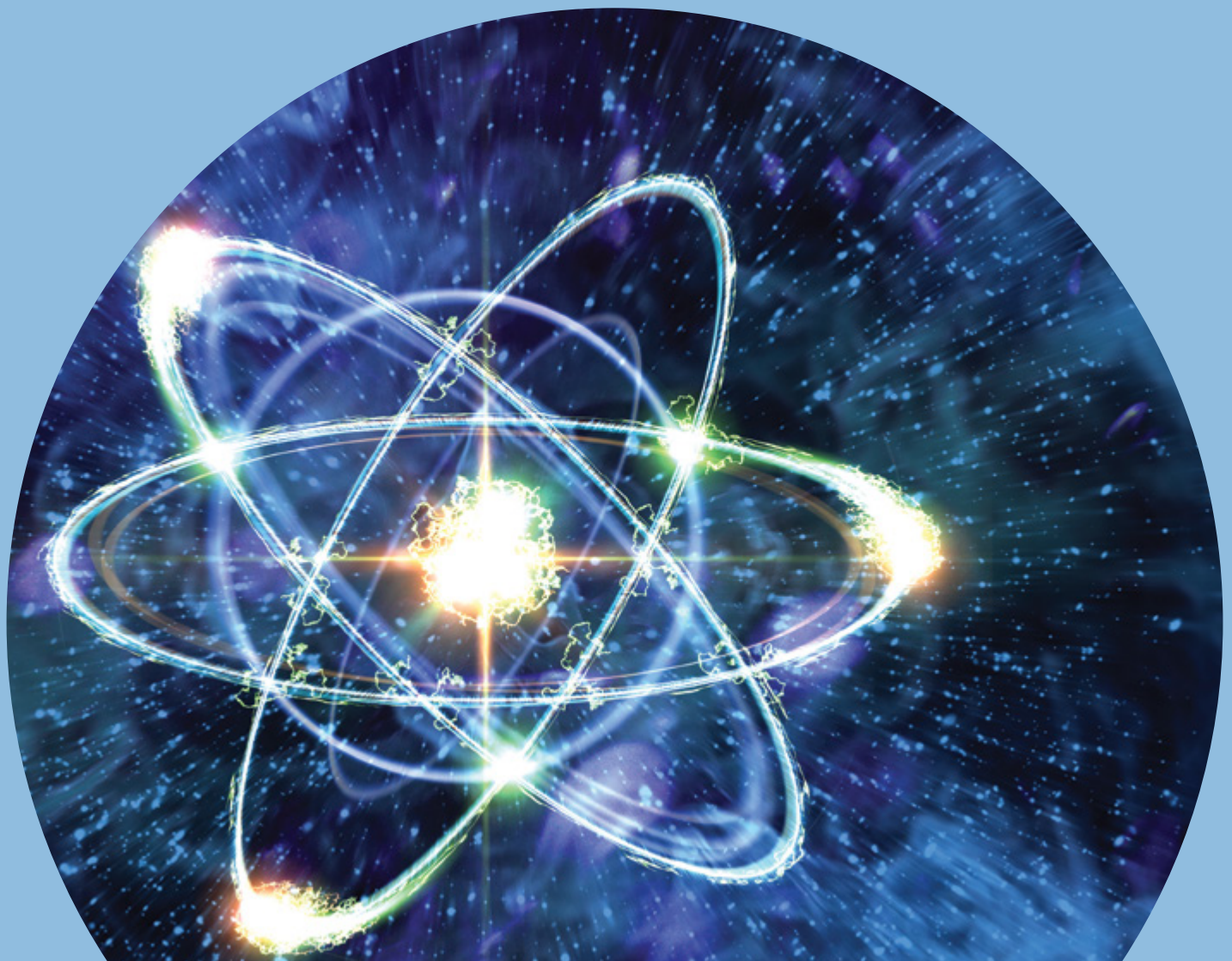
Department of Physics
Faculty of Science
College of Humanities and Sciences

NUS Physics

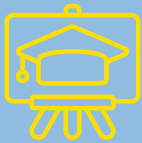
What underlies all natural phenomena? Physics. From subatomic interactions to the Big Bang, physics is the fundamental science that allows us to construct a rational view of the world and discover the connections between seemingly disparate phenomena. Today, physics research continues to expand the limits of technological possibilities in areas such as quantum computers, space exploration and medical applications.

At NUS Physics, you will develop your knowledge of matter and its behaviour through core subjects such as electricity and magnetism, nanophysics, quantum mechanics, relativity, condensed matter physics, thermodynamics, and atomic and nuclear physics.

Being part of the **College of Humanities and Sciences (CHS)** also means that you have the flexibility to pair your primary major in Physics with second majors and minors from the Faculty of Science and Faculty of Arts and Social Sciences (and beyond). Be it expanding your scientific horizons or contrasting with a humanities second major/minor – it's your choice.

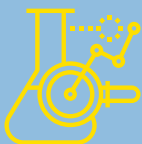


Why NUS Physics?



Quality teaching

Here at NUS Physics, you are assured of professors who are active in high-impact research and passionate about teaching. Our **high staff-to-student ratio** also means that professors have more time for you.



Intensive research

Whether it's discovering new knowledge in fundamental areas or tackling new problems, you are in the right place. With our faculty and **three affiliated research centres**, you get access to top-notch research expertise, facilities and equipment.

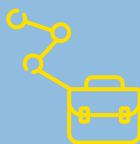
Affiliated Research Centres

- Centre for Quantum Technologies
- Centre for Advanced 2D Materials
- Centre for Ion Beam Applications



Global exposure

In addition to the Student Exchange Programme and NUS Overseas College, you also get to take part in **faculty-level programmes** such as the Physics Germany Immersion Programme and summer programmes to the University of Toronto and Hokkaido University.



Career opportunities

Physics is versatile – honing your skills in areas like **quantitative reasoning and problem-solving** that will stand you in good stead anywhere. Our graduates can be found in a wide range of industries: data analytics, defence, education, engineering, finance, healthcare, and research and development (R&D), to name a few.



Academic Programmes



Primary Major in Physics

Specialisation in

- Astrophysics
- Nanophysics
- Quantum Technologies



Second Major in Physics



Minor in

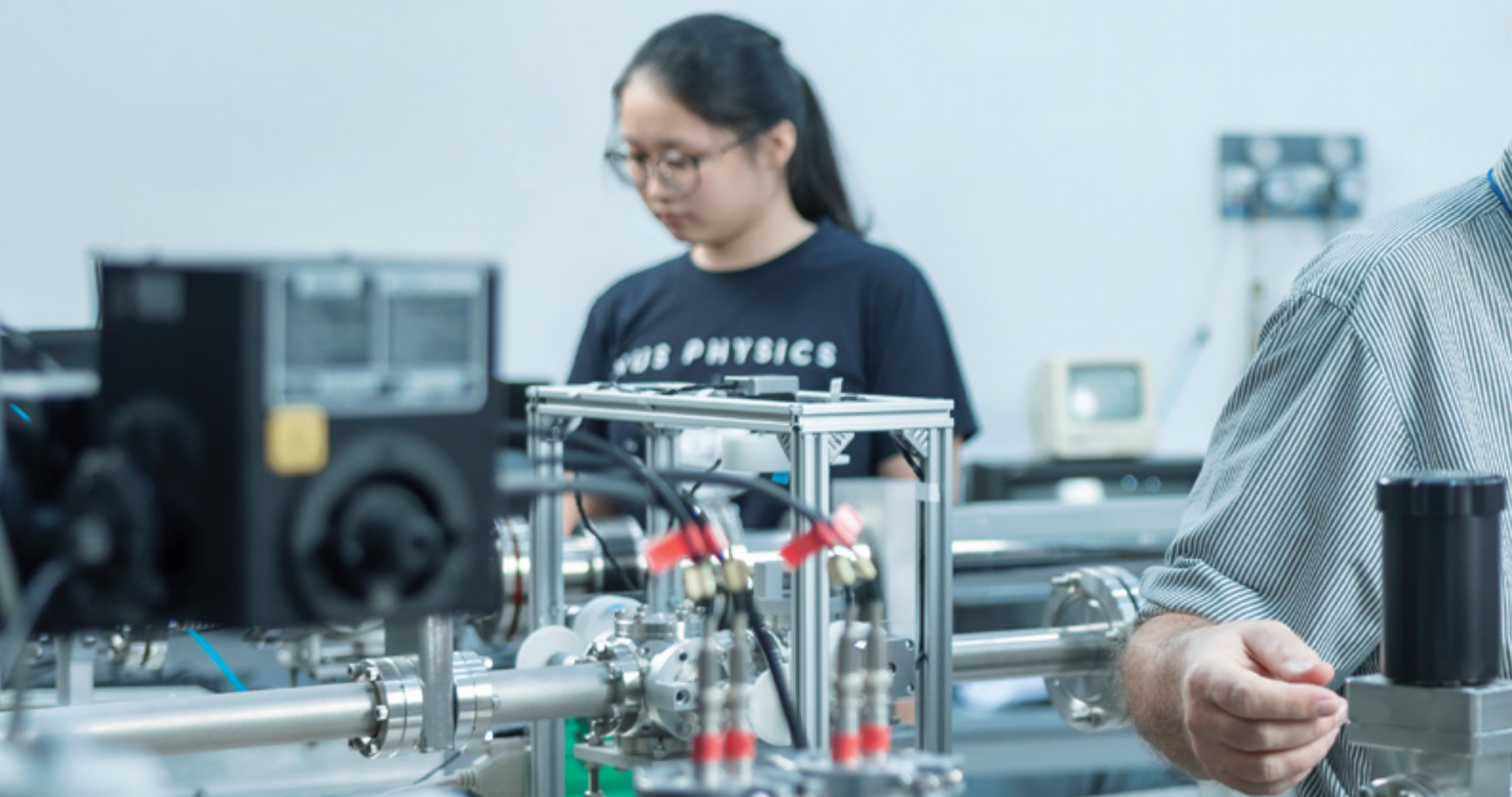
- Astronomy
- Biophysics
- Medical Physics
- Meteorology and Climate Science
- Nanoscience (Jointly offered with the Department of Chemistry)
- Physics
- Physics in Technology

Research Opportunities

Conduct independent research right from the undergraduate level – with a **Final Year Project (FYP)** or participate in the **Undergraduate Research Opportunities Programme in Science (UROPS)**.

Our research areas include:

- Artificial Intelligence for science
- Astrophysics
- Biophysics
- Condensed-matter physics
- Nonlinear dynamics and complex systems
- Physics of advanced functional materials
- Physics at nanoscale
- Quantum information and computing





"Given the accelerating pace of technology in most industries, a science degree is the best education to stay relevant."

– **Dr Bernard Leong**, Head of Machine Learning and Artificial Intelligence (ASEAN), Amazon Web Services
BSc (Hons) in Physics and Materials Science (1998)

"It's exciting to see the potential synergy that exists between quantum research and industry, which could bring tangible benefits to the economy and society."

– **Janet Lim**, Research & Development Process Engineer, Edmund Optics
BSc (Hons) in Physics (2017); MSc in Physics (2018)



Admission Requirements

Programme	Admission Requirements
Primary Major in Physics	A good H2 pass (or equivalent) in Mathematics/Further Mathematics
Primary Major in Physics with <ul style="list-style-type: none">• Specialisation in Astrophysics• Specialisation in Nanophysics• Specialisation in Quantum Technologies	
Second Major in Physics	
Minor in Physics	
Minor in Astronomy	H2 pass (or equivalent) in Mathematics/ Further Mathematics
Minor in Biophysics	Good H2 passes (or equivalent) in Physics, Chemistry and/or Biology
Minor in Medical Physics	Open to students from all faculties with good H2 passes (or equivalent) in Physics and Biology, subject to interview
Minor in Meteorology and Climate Science	H2 pass (or equivalent) in Mathematics/ Further Mathematics
Minor in Nanoscience	A good H2 pass (or equivalent) in Chemistry or Physics
Minor in Physics in Technology	H2 pass (or equivalent) in Mathematics/ Further Mathematics

For applicants without H2 Mathematics/Further Mathematics, simply read the bridging course MA1301/MA1301X Introductory Mathematics. (Only applicable for Primary Major, Second Major and Minor in Physics)

Department of Physics

National University of Singapore

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