

CHEMISTRY FAQs

NUS-College of Humanities and Sciences Open House 2023

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DIFFERENCES WITH OTHER PROGRAMMES

1. How does Chemistry at NUS stack up against other chemistry degree programmes in Singapore?

The NUS Chemistry Programme is a four-year programme leading to a BSc (Hons) under the College of Humanities and Sciences (CHS). Under CHS, you will have flexibility in depth in your study of chemistry, the opportunity to combine your chemistry education with other fields of study from both the Faculty of Science (FOS) and Faculty of Arts and Social Sciences (FASS), along with a foundational CHS core curriculum.

QS World
University
Rankings by
Subject 2020
- Chemistry

**Faculty of Science
Chemistry**

Four year Honours programme

Flexibility in depth:	<ul style="list-style-type: none"> • Major with specialisation in Chemical Research • Major • Second major • Minor • Minor in Analytical Chemistry
11 core modules for majors for Level 1-3	<ul style="list-style-type: none"> • Major (15 modules) • Second major (10 modules) • Minor (5 modules)

2. What is the difference between chemistry and chemical engineering?

A degree in chemistry is quite different from a degree in chemical engineering. A chemist is interested in the applications of chemistry in solving everyday problems, be they developing new materials for clean energy, investigating new drugs to cure disease or synthesising new molecules and materials. On the other hand, a chemical engineer is, first and foremost, an engineer who possesses technical knowledge in chemical plant operations.

3. What is the difference between medicinal chemistry and pharmacy?

Medicinal chemistry involves the syntheses, characterisation and biochemical reactivity of chemical compounds that have therapeutic properties. In the process of drug development, medicinal chemistry occupies an upstream position where a potential therapeutic compound is first designed and synthesised. Pharmacy deals with the formulation and dispensing of drugs. Pharmacists are healthcare experts who help patients understand and use their medications appropriately.

PROGRAMME INFORMATION

4. What are the main differences between the present and new chemistry curriculum under the College of Humanities and Sciences (CHS)?

Under CHS, all degrees are four-year direct honours degrees, compared to three years with an optional Honours year for the present Chemistry curriculum. The new common CHS curriculum (13 modules) will impart intellectual breadth, where you will acquire essential foundational skills in literacy, numeracy and critical thinking. The new Chemistry curriculum is flexible in depth under CHS as it allows you to chart your learning journey according to your interests, aptitudes and career aspirations. You can combine your Major or Minor in Chemistry along with other fields of study offered by the Faculty of Science (FOS) and the Faculty of Arts and Social Sciences (FASS).

5. What is the BSc (Hons) in Chemistry with Specialisation in Chemical Research about?

This is our flagship programme for the Chemistry Major.

- **Department requirements:** 11 core Chemistry modules including physical, inorganic, organic, and analytical chemistry, laboratory modules and 4 elective modules.
- **Faculty and University requirements:** 13 CHS core curriculum + 8 Unrestricted Electives (UE).
- **In addition:** Take (i) Undergraduate Research Programme module and (ii) Final Year Project module.

6. What other choices do I have for studying Chemistry in CHS?

One of the hallmarks of CHS is the flexibility it offers you in choosing and combining Majors/Minors from both FoS and FASS for interdisciplinary education. Other choices include: Chemistry Major, Second Major in Chemistry, Minor in Chemistry, and Minor in Analytical Chemistry. The department requirements are as follows:

- **Chemistry Major:** 11 core + 4 elective Chemistry modules
- **Second Major:** 10 Chemistry modules consisting of core 1000/2000/3000 modules with either CM3191 or CM3192
- **Minor in Chemistry:** 5 Chemistry modules consisting of core 1000/2000 modules
- **Minor in Analytical Chemistry:** 5 modules consisting of CM1102, CM2133, CM2143, CM3141 and CM3192

APPLICATION/ADMISSION

7. Can I join CHS with these 'A' Level grades or this Polytechnic GPA?

The indicative Grade Profile (IGP) for admission to NUS courses can be found at

[https://www.nus.edu.sg/oam/undergraduate-programmes/indicative-grade-profile-\(igp\)](https://www.nus.edu.sg/oam/undergraduate-programmes/indicative-grade-profile-(igp))

8. How do I apply?

For application details, please refer to NUS Office of Admissions <http://www.nus.edu.sg/oam/>.

9. If I am interested to be a Chemistry Major, how do I start?

Please take CM1102: Chemistry the Central Science, which is the introductory class for other higher level chemistry modules. This module will introduce chemistry in a thematic fashion, integrating physical, inorganic, organic and analytical chemistry.

10. I do not have H2-Level Chemistry or its equivalent but I am very interested in taking chemistry modules and even majoring in chemistry. Can I do so?

Yes. Please take CM1417 as a bridging module to attain H2-Level Chemistry (or equivalent) proficiency. After this module, you can proceed with CM1102 and beyond.

OTHER INFORMATION

11. With a chemistry degree, am I able to study medicine in the future?

Yes, if you choose to read medicine locally, it is possible to apply to Duke-NUS Graduate Medical School with a Bachelor's Degree in any discipline. A chemistry degree is particularly relevant and useful. Please refer to this site for their admission requirements.

12. What is the grade-free first semester?

CAREER PROSPECTS

13. What are my career prospects with a chemistry major?

Over the past years, more than 80% of chemistry graduates find employment within six months of graduation in many chemical-related companies as well as in other industries. A wide variety of positions is open to our graduates. They can work as an analytical chemist, quality assurance chemist, forensic scientist, crime scene specialist, research and development (R&D) scientist, compliance specialist, patent scientist, health and safety officer, educator, and even as a food and flavour scientist, medical technologist and financial manager.