

CHEMISTRY FAQs

NUS e-OPEN HOUSE 2020

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WHY NUS CHEMISTRY?

1. How does Chemistry@NUS, which is accredited by the Royal Society of Chemistry, stack up against other Chemistry programmes in Singapore?



Faculty of Science
Chemistry

NUS

4th (Honours) year
optional *

Specialisations:

- Medicinal Chemistry
- Material Chemistry
- Environment and Energy

12 compulsory major modules for 1st and 2nd year
2 compulsory advanced lab modules + 4 electives for 3rd year
Honours project + 4 electives for 4th year

QS World University Rankings by Subject 2019 - Chemistry

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The NUS programme is flexible where students with CAP > 3.2 have the option to graduate with a BSc or continue onto Year 4 (Honours) and graduate with a BSc (Honours). Students with CAP < 3.2 can graduate with a BSc in 3 years <http://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students/continuation-and-graduation-requirements>

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YOUR FUTURE CAREER

2. What are my job prospects with a Chemistry degree?

Over the past years, >80% of Chemistry graduates find employment within 6 months of graduation in many chemical-related companies as well as in other industries. Upon graduation, a wide variety of positions are open to our students, and they are able to work as an analytical chemist, quality assurance chemist, forensic scientist, crime scene specialist, R&D

scientist, patent scientist, health and safety officer, educator and even as food and flavour scientist, medical technologist and financial manager.

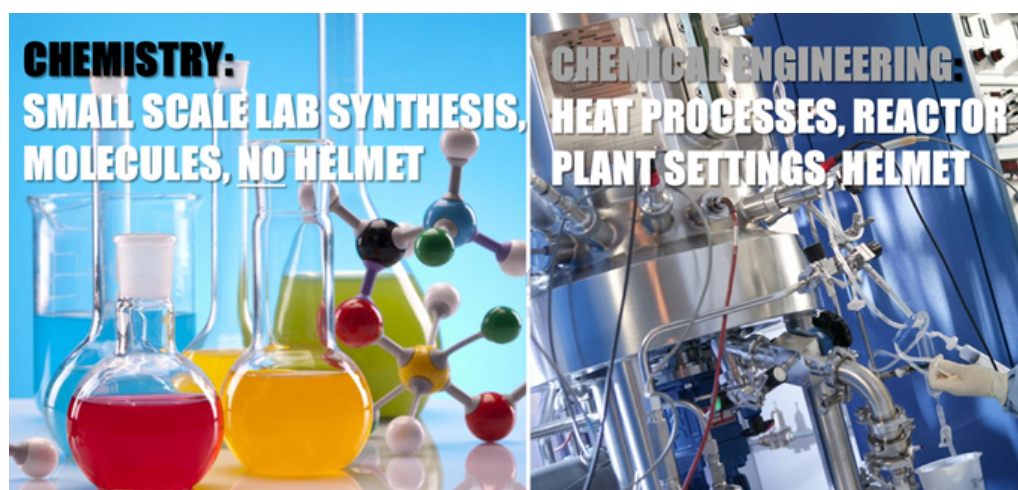
While you may want to be pragmatic about job prospects, the interest, passion and competency in chemistry are also valid reasons why you should pursue this major. Furthermore, as a central science subject, you will be able to hone critical thinking skills, approach and solve problems systematically. Many more opportunities will be awaiting you.

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DIFFERENCE BETWEEN DISCIPLINES

3. 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 diseases or synthesizing 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.



4. What is the difference between Medicinal Chemistry and Pharmacy?

Medicinal chemistry involves the syntheses, characterization 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 synthesized. Pharmacy deals with the formulation and dispensing of drugs who are also health experts on helping patients understand and use their medicines appropriately.



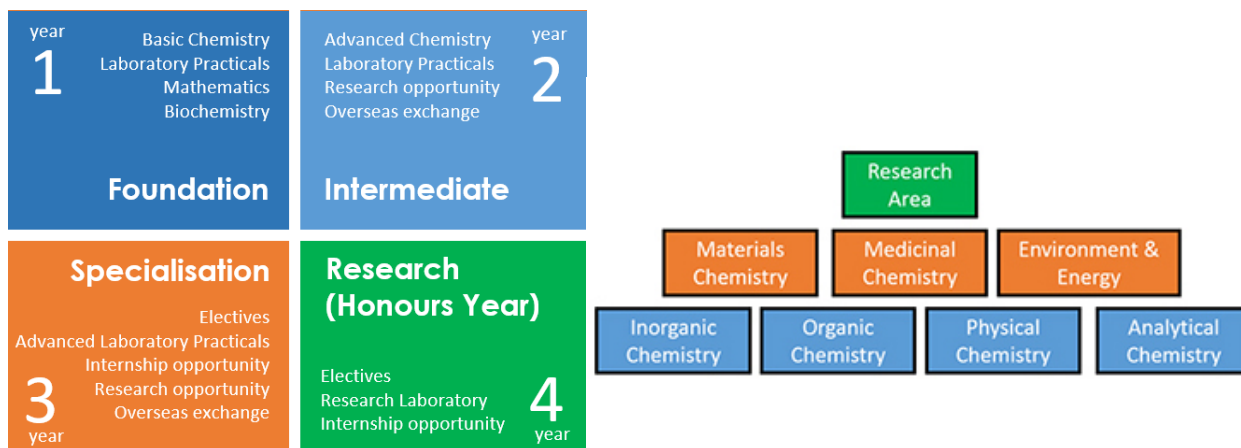
5. With a Chemistry degree, am I able to study medicine in the future?

Yes, if one chooses to read medicine locally, it is possible to apply to the 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: <https://www.duke-nus.edu.sg/admissions/admission-requirements>. You may also like to consider specialising in medicinal chemistry, one of three specialisations offered to our undergraduates.

CURRICULUM

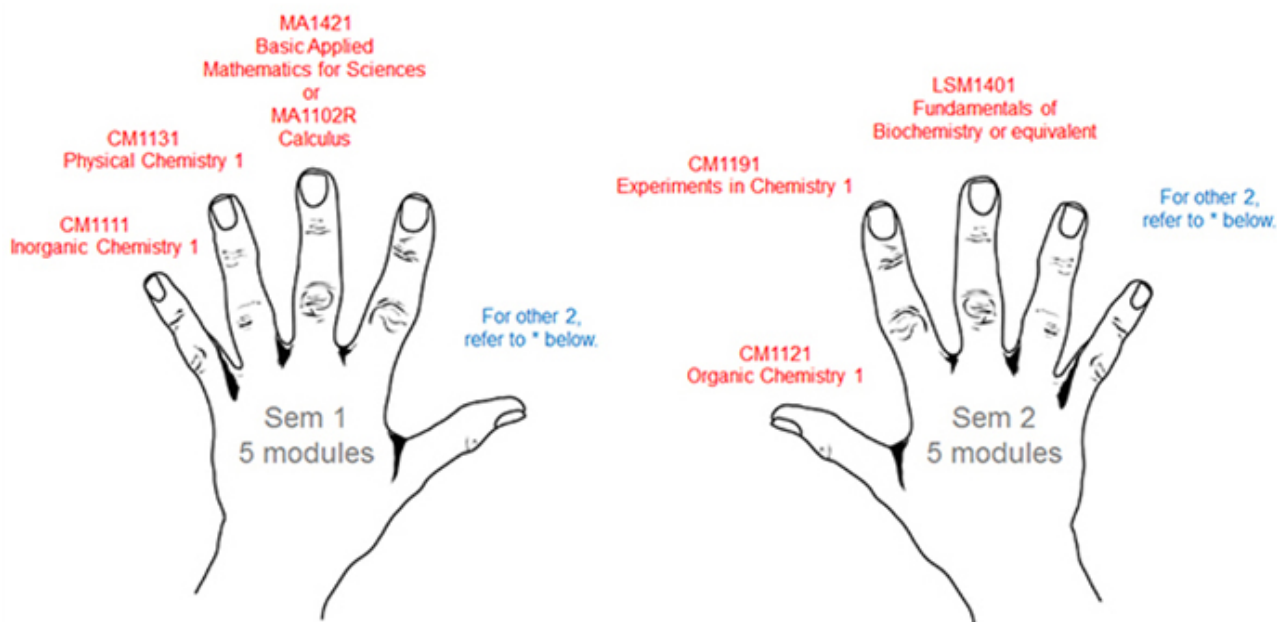
6. What is the BSc (Honours) in Chemistry with Specialisation all about?

Our students graduate with BSc (Honours) in Chemistry by reading modules in Inorganic, Organic, Physical and Analytical Chemistry. We have now made it possible for them to opt for one specialisation namely, Materials Chemistry, Medicinal Chemistry or Environment and Energy. As long as the students read four to six modules relevant to their area of specialisation in Year 3 and 4, they will graduate with BSc (Honours) in Chemistry with Specialisation in (area of specialisation). The specialisations are areas that are currently 'hot' and aids in preparing future-ready graduates in related industries.



7. Upon entering NUS as a chemistry major, what will I study in the first year?

You will study Inorganic and Physical Chemistry in the first semester as well as taking a mathematics module that will help you in understanding the basic concepts of chemistry. A typical student reads five modules in each semester, so you can choose two other modules which can fulfil your other university requirements such as general education, faculty or unrestricted elective requirements. In semester 2, two of your modules will be organic chemistry and biochemistry. You will also go to the laboratory to carry out chemistry experiments, and read two other non-chemistry modules.



* Other 2 modules in each semester can be: University Level Requirements or Unrestricted Elective Modules:
<http://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students/curriculum-structure>

8. I have a general question about Double Degrees.

Please refer to this site: <http://www.science.nus.edu.sg/undergraduate-studies/ugprog/ddp>.

9. I have a general question about Grade-free First Semester.

Please refer to this site: <http://www.nus.edu.sg/registrar/academic-information-policies/undergraduate-students/continuation-and-graduation-requirements>.

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ADMISSION AND APPLICATION

10. Can I enter Science with these 'A' level grades or this Polytechnic GPA?

The Indicative Grade Profile (IGP) for admission to NUS courses can be found at <http://www.nus.edu.sg/oam/gradeprofile/sprogramme-igp.html>.

11. Which diplomas in polytechnics can be considered to be admitted to Chemistry?

The local polytechnic diplomas accredited for the Chemistry major can be found at <http://www.nus.edu.sg/oam/apply-to-nus/polytechnic-diploma-from-singapore/subject-pre-requisites>.

12. What is Advanced Placement Credit (APC) and how do I apply for APC?

The Advanced Placement (AP) test assesses the knowledge and ability of students and grants credits to those who do well so that they can be exempted from lower-level modules and have the prerequisites to read higher-level modules directly. This way, students can graduate in a shorter time. Currently, the Department of Chemistry offers the following modules for APCs: CM1121 and CM1131. To apply for APCs in these modules, candidates must send their application form to the Dean's Office by a certain deadline. For further information, refer to <http://www.science.nus.edu.sg/education/undergraduate/ug-admission/advanced-placement-credits>.

13. Interesting... how do I learn more or apply?

Each year, NUS Open Day takes place in March (<http://www.nus.edu.sg/>) and Science Open House in May (<http://www.science.nus.edu.sg/>). For further details, please kindly email: chmbox3@nus.edu.sg. For application details, please refer to <http://www.nus.edu.sg/oam/>.

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