

Frequently asked questions

General information

1. What are H1 subjects and how are they different from H2 subjects?

A H1 subject is equivalent to half of a H2 subject in terms of content and curriculum time. However, the intellectual difficulty, rigour and skills required in H1 subject are comparable to that of a H2 subject.

2. What is a contrasting subject?

A contrasting subject is a content subject taken outside a student's main area of specialisation. It helps to provide a broad base of learning which prepares a student for the multidisciplinary approach in university education. Contrasting subjects can be offered at H1 or H2 Level.

Upon admission to the college, you will receive a guide in selection of subject combination.

3. Can I offer the same subject at both H1 and H2 Levels?

You are not allowed to take the same subject at both H1 and H2 levels as this would lead to a narrowing of the range of learning. A H1 subject covers part of the skills and content found in the corresponding H2 subject.

4. How do I go about choosing my subject combination?

We strongly encourage students to consider a list of factors in choosing the right combination:

1. their strengths, interests and passion towards the subjects
2. If their O-level subject combination and results ensure readiness for the A-Level
3. If the A-Level combination meet the university courses' prerequisites which the students would like to pursue in
4. If their future A-Level results are able to meet the University's course's indicative Grade Profile to evaluate your chances of entry into the desired course.

The College will provide the necessary guidance and information during the orientation period and support you in your selection process. You can also consult our college Education Career Guidance counsellor to explore the suitability of subjects you can take.

You can obtain more information on career and subject requirements by accessing the MOE MySkillsFuture Portal, www.myskillsfuture.sg on the internet. In this portal, you can gather more information related to the other aspects of the careers you are interested in such as the nature of the career, career path, employment opportunities and so on.

FAQ ON SCIENCE

1. Can I do an A-Level science subject if I do not have a corresponding O-Level Science subject?

The syllabus of a science subject at A-Level builds on and extend the content coverage at O-Level. Students will need to have knowledge and understanding of the subject at O-Level, either as a pure subject or as part of a combined science subject which is the assumed knowledge to offer the science subjects. Teachers will build on these assume knowledge as part of the A-Level curriculum. You will not be able to select the subject as you have not acquired the assumed knowledge.

2. How different is an A-Level Science different from O-Level science subject?

A-Level science subjects are pure science subjects. The topics learnt at A-Level are a continuum from the O-Level pure sciences. The O-Level syllabus is foundational and provides the necessary background for study at the A-Level. At the A-Level, a higher level of processing skills and deeper understanding of the scientific theories and concepts are required as the assessment is pitch at a much more demanding level. Many O-Level pure science students expressed that the A-Level subject requirement is a quantum jump in comparison to the O-Level. It will be even more so for students who offered only combined science.

3. Are there any criteria set for Science subjects offered?

You can refer to the college prospectus and college website for the list of subjects offered and subject eligibility criteria.

Currently, there are no subject pre-requisites for science students. However, students must have the assumed knowledge for either H1 or H2 sciences. Assumed knowledge refers to the set of content knowledge that students are expected to have learnt in advance, as part of a corresponding subject at O-Level, which teachers will build upon as part of the A-Level syllabus. However, if a subject or subject combination is oversubscribed, students will be selected based on academic merit and should refer to the indicative grade profile in order to make an informed decision.

4. What are the Indicate Grade Profiles (IGP)?

If a subject or subject combination is oversubscribed, students will be selected based on academic merit. Not all students who have selected the subject will be offered. In order to help students in assessing their competitiveness for the subject, the College has put together some indicative cut-off points in the form of an Indicative Grade Profile (IGP) to assist students in making informed choices for subjects with subject pre-requisites or assumed knowledge.

Indicative Grade Profiles (IGP) refers to the grades scored by students who offered the relevant GCE O-Level subjects. The grade profiles may vary from year to year, depending on the number and grade performance of students, and the number of places for the subject. Meeting the previous year's grade profile does not guarantee that the subject can be offered, and vice versa.

Please refer to college website for the information and details.

Indicative Grade Profile		
Subject	Level	Indicative Grade at GCE O-Level
Mathematics	H2	Pass in Additional Mathematics <u>OR</u> A2 in Elementary Mathematics
Physics	H2	Pass in Pure Physics <u>OR</u> A2 or better in Science (Physics/Chemistry or Physics/Biology)
	H1	Pass in Pure Physics <u>OR</u> Science (Physics/Chemistry or Physics/ Biology)
Chemistry	H2	Pass in Pure Chemistry <u>OR</u> A2 or better in Science (Chemistry/Physics or Chemistry/Biology)
	H1	Pass in Pure Chemistry <u>OR</u> Science (Chemistry/Physics or Chemistry/ Biology)
Biology	H2	Pass in Pure Biology <u>OR</u> A2 or better in Science (Biology/Chemistry or Biology/Physics)
	H1	Pass in Pure Biology <u>OR</u> Pass in Science (Biology/Chemistry or Biology/Physics)
Double Sciences H2 Chemistry & H2 Physics	H2	Pass in both Pure Chemistry and Pure Physics <u>OR</u> Pass in Pure Chemistry <u>and</u> A2 or better in Combined Science (Physics/Biology) <u>OR</u> Pass in Pure Physics <u>and</u> A2 or better in Combined Science (Chemistry/Biology)
Double Sciences H2 Chemistry & H2 Biology	H2	Pass in both Pure Chemistry and Pure Biology <u>OR</u> Pass in Pure Chemistry <u>and</u> A2 or better in Combined Science (Biology/Physics) <u>OR</u> Pass in Pure Biology <u>and</u> A2 or better in Combined Science (Chemistry/Physics)
Note: A grade of C6 or better is considered an O-Level pass.		

5. How is the science practical assessment like?

Students taking H2 Science subjects will sit for the Science Practical Examination (P4). P4 assess students' competency in a wide range of practical skills such as planning, manipulation, measurement and observation, presentation of data and observations and analysis, conclusions and evaluation in a formal practical assessment.

6. What are the enrichment opportunities in learning sciences at YIJC?

Our enrichment opportunities also includes leadership skills development and 21 CC. These include Learning journeys to Lee Kong Chain Museum and Science centre, subject academic council programmes for students to lead in student-initiated activities such as organising amazing race with science themes, conduct science shows etc. There is immersion program where you will learn about cultures of other countries and interact with students with different backgrounds. For the academically inclined students, they have the opportunity to be involved in Science research attachment programme or taking part in Biology, Physics or Chemistry Olympiad. We also have Talent Development Programme that provides opportunities to widen the horizons in Science education.

FAQ ON SCIENCE- BIOLOGY

1. What are the career prospects? What are the related courses I can take in the university?

Acquiring Biology knowledge opens a myriad of opportunities in careers such as in healthcare (medicine, dentistry, pharmacy, allied health, medical research), education (teacher, lecturer, science research), biotechnology (drug development, agriculture), engineering (building things to solve problems & make life better), finance (banking, insurance)

Attending Education Career Guidance (ECG) talks organised by ECG counsellor could help you in your selection of subjects that allows you to chart towards the university course of your choice and ultimately the job that you aspire.

2. What is the difference between 'O' and 'A' level Biology syllabus?

In both H1 and H2 Biology, you can expect a wider range of topics and deeper exploration of content relative to 'O' Level Biology. For example, new topics which will be covered at A level Biology include Climate Change (impact of change of climate on animals and plants), Infectious Diseases (how microorganisms cause infection and diseases in humans such as HIV, Influenza), Biological Evolution (how different species evolve from ancestors) etc.

Furthermore, the emphasis of the syllabus shifts, from factual material to application of scientific principles. Memory work is expected with understanding of key biological concepts in different contexts. Students are expected to make sense of data provided in novel situations and apply their learnt knowledge in the new contexts given in assessments. Experimental component is another major component in the learning of biological concepts at A level Biology.

3. What is the difference between H1 and H2 Biology syllabus?

Comparing H1 and H2 Biology syllabus

H1 Biology covers significantly less content (in breadth and depth) as compared to H2 Biology. This applies to both the range of topics as well as the individual depth of each. Examples of differences in syllabus are as follows:

- In H2 Biology, you will learn about Infectious Diseases (how microorganisms cause infection and diseases in humans such as HIV, Influenza), Cell Signalling (How cells communicate with one another to create specific response by external stimulus), Regulation of Gene Expression (how genes are differentially expressed to bring about a specific response by a cell), Genetics of Viruses and Bacteria (structure of these microorganisms and how they infect human cells). However, these topics are not taught in H1 Biology.
- Both H1 & H2 Biology teaches you about Cellular Structure and Organisation, Biomolecules Genetics of Inheritance, Energetics (Photosynthesis and Respiration), and Gene Expression. However, the depth of content in H1 for these topics is noticeably less.
- H1 Biology has no practical assessment. In contrast, H2 students have practical sessions throughout the college calendar year focusing on four practical skills (Planning (P), Manipulation, measurement and observation (MMO), Presentation of data and observations (PDO), Analysis, conclusions and evaluation (ACE).

4. What skills does one need to demonstrate to do well in H1 and H2 Biology?

- An understanding of the nature of scientific knowledge
- Ability to apply scientific inquiry skills
- Curious & inquiring mind
- Resilience to solve problems & grasp complex concepts
- Use of data to interpret trends and explain phenomenon
- Good communication skills (verbal and written)

5. With combined science, will I be able to do H2 or H1 Biology?

- Students taking H2 or H1 Biology are assumed to have knowledge and understanding of Biology at 'O' level, as a single subject or as part of a balanced Science course (as in Combined Science subject with Biology component).
- However, if a subject or subject combination is oversubscribed, students will be selected based on academic merit and should refer to the indicative grade profile in order to make an informed decision.

6. Is there any support from the college in helping students cope with H2 & H1 Biology?

- Besides having programmes such as Learn to Learn Better (LTLB) to guide students to perform well academically, the college Student Well-being committee puts in place mechanisms to help students to cope in their learning. Students can also leverage on consultation sessions with respective teachers to clarify their concepts and content after curriculum hours. Remediation sessions are also conducted for academically weak students to improve their learning. SLS lesson packages (with recorded videos and checkpoints) are also ready for students to utilize to bridge their learning gaps.

FAQ ON SCIENCE- CHEMISTRY

1. What are the career prospects? What are the related courses I can take in the university?

H2 Chemistry prepares students to study chemistry and chemistry-related subjects at university level by developing a good foundation in the core ideas of chemistry and understanding of the skills, ethics and attitudes relevant to the practices of science.

- H2 Chemistry aims to develop abilities and skills that are relevant to the study and practice of science, useful in everyday life. It encourages efficient and safe practice as well as the systematic presentation of information and ideas appropriate for different audiences and purposes.
- Acquiring chemistry opens a multitude of doors in careers such as medical, chemical, food, pharmaceuticals, agriculture, energy, research or academic areas.

H2 Chemistry is one of the pre-requisite in many of the Science related courses in the university. For example, for common engineering, in NTU, students will need to have H2 pass in Math AND H2 pass in one of the science subject or computing. Courses that specifically requires chemistry are dentistry, chemical engineering and medicine.

2. What is the difference between 'O' and 'A' level chemistry syllabus?

- In both H1 and H2 Chemistry, you can expect a wider range of topics and deeper exploration of content relative to 'O' Level Chemistry.
- Furthermore, the emphasis of the syllabus shifts, from factual material to application of scientific principles. As such, experimental work becomes a big component of its content.

3. What is the difference between H1 and H2 level chemistry syllabus?

Comparing H1 and H2 chemistry syllabus

- H1 Chemistry covers significantly less content as compared to its H2 counterpart. This applies to both the range of topics as well as the individual depth of each. Examples of differences in syllabus are as follows:
 1. In H2 Chemistry, you will learn about Solubility Equilibria, Electrochemistry and Transition Elements. However, H1 Chemistry does not cover these topics.
 2. Both H1 & H2 Chemistry teaches you about Chemical Energetics, Reaction Kinetics and Chemical Equilibria. However, the depth of content in H1 for these topics is noticeably less.
 3. H1 Chemistry has no practical assessment. In contrast, H2 students have practical sessions throughout their school calendar year.

4. What skills does one need to demonstrate to do well in Chemistry?

- An understanding of the nature of scientific knowledge
- Ability to apply science inquiry skills
- Curiosity
- Attention to details
- Adaptability
- Written and oral communication

5. With combined science, will I be able to do H2 or H1 Chemistry?

- Candidates taking H2 or H1 Chemistry are assumed to have knowledge and understanding of Chemistry at 'O' level, as a single subject or as part of a balanced science course.
- However, If a subject or subject combination is oversubscribed, students will be selected based on academic merit and should refer to the indicative grade profile in order to make an informed decision.

6. Is there any support from the college in helping students cope with H2 Chemistry?

- Besides having programmes such as Learn to Learn Better Programme (LTLB) to guide students to perform well academically, the college Student Well-being committee puts in place mechanisms to help students to cope in their learning. Students can also leverage on consultation sessions with respective teachers to clarify their concepts and content after curriculum hours. Remediation sessions are also conducted for academically weak students to improve their learning. Success is also dependent on student's learning attitude, self-discipline and drive to achieve desired goals.

FAQ ON SCIENCE- PHYSICS

1. What are the career prospects? What are the related courses I can take in the university?

- Studying physics opens a multitude of doors in careers such as engineering (building things to solve problems & make life better), robotics & Artificial Intelligence (using cutting-edge technologies to make life easier & safer), finance (managing financial risks through computer modeling and working with data) or education (nurturing future generation).
- Attending Education Career Guidance (ECG) talks organised by ECG counsellor could help you in your selection of subjects.

2. What is the difference between 'O' and 'A' level physics syllabus?

- In both H1 and H2 Physics, you can expect a wider range of topics and deeper exploration of content relative to 'O' Level Physics. For example, new topics which will be covered at A level physics are gravitational field (how satellites work) and Nuclear Physics (how nuclear plant work). Furthermore, the emphasis of the syllabus shifts, from factual material to application of scientific principles. As such, experimental work becomes a big component of its content.

3. What is the difference between H1 and H2 physics syllabus?

Comparing H1 and H2 physics syllabus

- H1 Physics covers significantly less content as compared to its H2 counterpart. This applies to both the range of topics as well as the individual depth of each. Examples of differences in syllabus are as follows:
- In H2 Physics, you will learn about superposition (how noise cancelling headphones & diffraction in astrophysics) and quantum physics (wave-particle duality & x-ray production).
- Both H1 & H2 Physics teaches you about Newtonian mechanics, electricity and magnetism, and nuclear physics. However, the depth of content in H1 for these topics is noticeably less.
- H1 Physics has no practical assessment. In contrast, H2 students have practical sessions throughout their school calendar year.

4. What skills does one need to demonstrate to do well in H1 and H2 physics?

- An understanding of the nature of scientific knowledge
- Ability to apply science inquiry skills
- Curious & inquiring mind
- Resilience to solve problems & grasp complex concepts
- Good communication skills

5. With combined science, will I be able to do H2 or H1 physics?

- Candidates taking H2 or H1 Physics are assumed to have knowledge and understanding of Physics at 'O' level, as a single subject or as part of a balanced science course.
- However, If a subject or subject combination is oversubscribed, students will be selected based on academic merit and should refer to the indicative grade profile in order to make an informed decision.

6. Is there any support from the college in helping students cope with H2 & H1 physics?

- Besides having programmes such as Learn to Learn Better Programme (LTLB) to guide students to perform well academically, the college Student Well-being committee puts in place mechanisms to help students to cope in their learning. Students can also leverage on consultation sessions with respective teachers to clarify their concepts and content after curriculum hours. Remediation sessions are also conducted for academically weak students to improve their learning.