

*For BSc Students
2024-25*

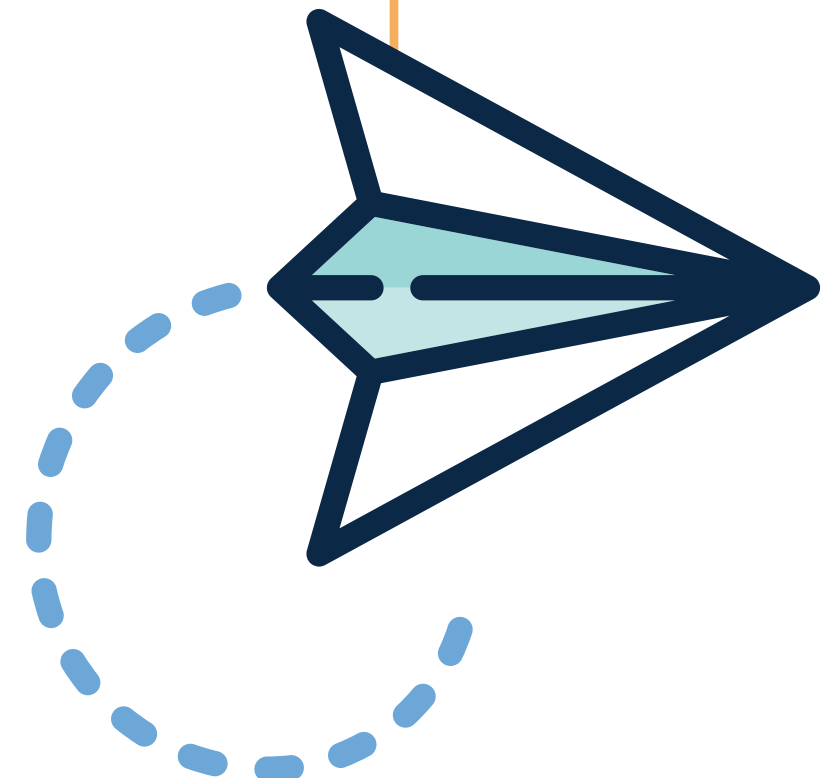


The University of Hong Kong

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Introduction

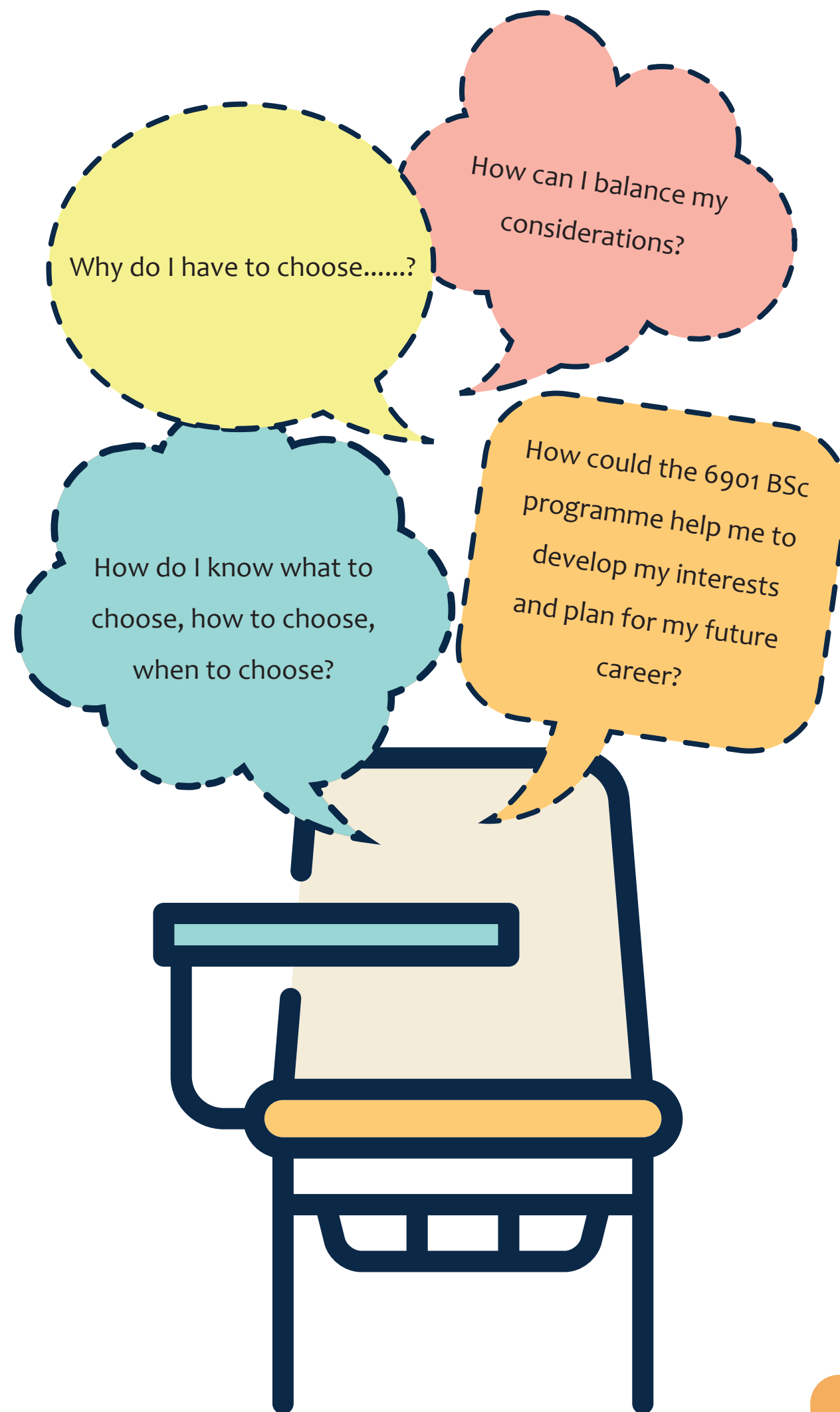
Welcome to the HKU Science Faculty!

You must be fascinated by the enormous choice of majors and courses available to you. Indeed, the University is the place for you to expand your horizon, to attempt new endeavours, and to acquire new experiences.

How should you get the most out of your University education?

The HKU BSc programme is rich, diverse, flexible, and challenging. You may choose among the list of Science majors leading to the Bachelor of Science degree. You are not required to declare your major (or minor) in the first year. You only have to declare your primary Science major online before the start of your third year of study, the latest. For those of you who have already identified a strong interest in a particular discipline and wish to specialize early, the curriculum enables you to pursue your subject of interest in a rigorous manner. Those of you wishing to explore multiple interests may take courses in different disciplines or even consider pursuing a minor or even a second major. If you are not sure which major will suit you best, you can explore different possibilities in the first year before committing to a particular major. Some majors may require you to have certain HKDSE subjects or equivalent. The programme even provides certain preparatory courses for those of you without the required background before you decide whether to follow the major. In all cases, you do not need to commit to a major before the end of Year 2, and you may choose to use the first year to explore and find out your real interest, ability, and career aspiration.

Choosing a suitable major is important and may not be an easy decision. This booklet provides you with some guidance and describes some of the resources available. The Academic Advisers / Course Selection Advisers will also assist you to plan your study to ensure a most meaningful and enjoyable learning experience at HKU.



Making a Major Decision

A. Get to Know Yourself

In BSc programme, you may choose to concentrate on a single primary Science major (major 1), or to do a major and minor(s) or even a second major (major 2). Before you commit to a certain plan of study, you should first do a rigorous self-assessment of your true interest, ability, and aspiration. You should ask yourself the following questions:



No one single answer to any of the questions above alone should dictate the choice of your study plan. Instead, you should make a balanced consideration between interest, ability, and career aspiration when you decide which major to pursue.

B. Identify a Similar Profile

While the followings are by no means all the possible scenarios, you may want to see which of the following situations is most similar to yours:

Scenario 1

I am keenly interested in this one Science subject and none others. I want to learn as much about this subject as possible. I am sure this is what I would like to do for my career. If possible, I would like to pursue further studies in this subject.

Scenario 2

I am interested in this Science subject. I also believe my studies should be diversified and I should learn more across different disciplines because many fields in Science are interdisciplinary in nature now.

Scenario 3

I have a strong interest in this one Science subject, but have not had the opportunity to study it before for some reasons. I believe nevertheless I have the motivation and ability to handle this subject.

Scenario 4

Honestly I do not have a clear idea what I should do at this moment. I have an interest in a particular subject, perhaps because I have achieved a good grade in it before, but I am not sure if this is something I should pursue as my major.

Scenario 5

I would like to specialise in a science discipline with enriched subject knowledge. I am considering to pursue research in science after finishing my BSc degree.

Scenario 6

I do not plan to further study or pursue research after finishing my BSc degree. Rather, I would love to start up my own business and try to connect my academic knowledge with the real world.

Scenario 7

I am not interested in doing research in science, and I do not want to start my work life after completing my Bachelor's degree. I may take a taught postgraduate degree afterwards.

C. How About These Strategies?

We do not believe there is one single strategy for each scenario. Your interest and your situations may also change during the course of study. However, if you can identify with one of the scenarios closely, these are some suggested strategies.

Scenario 1

In addition to following the recommended major courses of that subject, you should consider using the two Science Foundation courses as the starting point to explore different disciplines. You may find these courses surprisingly rewarding!

Scenario 2

In addition to following the recommended courses of that major, you should try to take as many elective courses in other disciplines as possible. Whether to do a minor or a second major depends on your ability, and the amount of time and effort you are willing to devote to studying.

Scenario 3

By all means, give yourself a chance! You can take the preparatory courses and see whether you can handle the subject matter before you consider taking it as a major or minor. We suggest you should take some courses in another Science major discipline as a fall back.

Scenario 4

You can first list 2 to 3 majors that interest you the most and that you believe you can handle. After you have taken a few courses in each of these majors, if timetable allows, it should become clear to you which one suits you the most.

It is perfectly alright not being able to decide on your major of study right away. There could be factors you have not fully considered when you design your study plan while you first entered into the University. Academic Advisers / Course Selection Advisers / Student Peer Advisers in the Faculty, Counsellors in CEDARS and Academic Adviser in Academic Advising & Scholarships Office are resourceful professionals who are enthusiastic to assist you individually in making such decisions.

Scenario 5

If you are interested in having a more intensive training in one subject, you may consider taking one of the following intensive major programmes:

- Major in Biological Sciences (Intensive) (144 credits)
- Major in Chemistry (Intensive) (144 credits) - accredited by the Royal Society of Chemistry (RSC), UK
- Major in Ecology & Biodiversity (Intensive) (144 credits) - accredited by the Royal Society of Biology (RSB), UK
- Major in Geology (Intensive) (150 credits) - accredited by the Geological Society of London, UK
- Major in Mathematics (Intensive) (144 credits)
- Major in Molecular Biology & Biotechnology (Intensive) (144 credits) - accredited by the Royal Society of Biology (RSB), UK
- Major in Physics (Intensive) (144 credits)

Scenario 6

There is a new Minor in Science Entrepreneurship which aims at broadening students' horizons with respect of entrepreneurship. Placing strong emphasis on practical experience and fruitful career opportunities, the Minor incorporates both entrepreneurship internship and capstone project in the syllabus, including entrepreneurship-related competitions or business analysis of enterprises.

For more information about this new Minor, please visit
<https://www.scifac.hku.hk/prospective/ug/minor-in-science-entrepreneurship>.

Scenario 7

The Faculty offers seamless articulation to a number of widely recognised postgraduate programmes:

- To Doctor of Veterinary Medicine (DVM) at the University of Melbourne (UoMelb)
 - available to students who are majoring in Biological Sciences, Biochemistry, Ecology & Biodiversity, Food & Nutritional Science and Molecular Biology & Biotechnology
- To Science Taught Postgraduate Programmes at HKU, including:
 - Master of Data Science (MDASc)
 - Master of Statistics (MStat)
 - MSc in Environmental Management
 - MSc in the field of Applied Geosciences
 - MSc in the field of Food Industry: Management and Marketing
 - MSc in the field of Food Safety and Toxicology
 - MSc in the field of Physics
 - MSc in Artificial Intelligence
 - MSc in Chemical Technologies for Health and Materials

Please refer to <https://www.scifac.hku.hk/current/ug/articulation-pathways> for more details.



Are You Qualified to Take this Major or Minor?

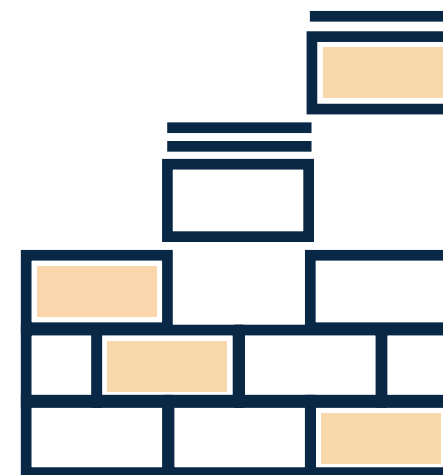
Can you select this major or minor if you have not taken the related HKDSE subjects?

Some majors and minors may require students to have certain HKDSE subjects or equivalent and if you do not have the required background, you may need to take certain preparatory courses before you decide whether to follow the major (or minor). Please consult Course Selection Advisers for advice that will better suit your individual background.

How is this related to the Science Foundation courses?

Two Science Foundation courses (SCNC1111 Scientific Method and Reasoning and SCNC1112 Fundamentals of Modern Science) are offered as core courses in the 4-year BSc curriculum to give students a common science experience and prepare them with sufficient background to pursue any of the majors in the 6901 BSc programme. The objectives of the science foundation courses are (1) to ensure all students in the BSc programme have acquired by the end of the first year a certain level of competence in the core sciences and the ability to reason in logical and quantitative manners, (2) to give students a holistic view of the science, including the history of scientific developments, the scientific inquiry method, and the nature of the science disciplines, and (3) to provide students with the opportunity to expose to different science subjects before they commit to a particular major of study.

You may consider taking advantage of these courses as starting points to explore different areas of interest.



Do You Need to Do a Minor or a Second Major (Major 2)?

Some myths and misconceptions

Myth:

I must do a minor if I go by the minimum requirements in my major.

Reality:

It is perfectly alright to do the minimum requirements in a major without a minor. A minimum major without a minor is not a less respectable degree than any major-minor combination.

Myth:

I must do a minor or a second major (major 2) to demonstrate a broadened background.

Reality:

You can achieve an equally broad academic training without doing a minor. In fact, an academic record showing a wide range of elective courses from various disciplines may provide you with the background training to understand and discuss issues intelligently in different subjects, and the ability to connect knowledge and concepts across disciplines.

Why choose a minor?

A minor is a structured academic programme for those students pursuing the subject as a second interest. Here are some of the reasons for doing a minor.

- You have more than a casual interest in an elective subject.
- You would like to be recognized to have achieved a certain extent of knowledge in the elective subject.
- The minor can enhance your study major and improve your opportunities for further studies or career.

In most cases, you can enroll in the same courses listed in the curriculum without formally registering for a minor in that subject. Deciding to do a minor in a certain subject may actually reduce your flexibility to take other elective courses because of the core requirements and possible timetable clashes.

What about a second major (major 2)?

A double major in two different subjects bears testimony to the student's academic ability and may enable the student to seek career in either area. Here are some of the reasons for doing a second major.

- You have a strong interest in two different subjects.
- You have confidence in your ability to study two subjects at the same time.
- You are committed to devote much time and effort on study.
- You believe the dual major can enhance your opportunities for further studies or career.

Before committing to do a minor or a second major (major 2), you should ask yourself the following questions:

- ▶ Do I have the background and ability to complete the additional course requirements?
- ▶ Can I afford the time and effort?
- ▶ Would the minor or second major enhance my academic training and career prospect?
- ▶ Does the minor or second major agree with what I want to achieve for my university learning?
- ▶ Would doing a minor or a second major actually hamper my intention to broaden my horizon in even more disciplines?
- ▶ Are there other endeavours I would rather devote my time?

Resources for Advice and Support

Web-based Information System & Handbooks

- A. Handbook for BSc, BSc&MRes (Science Master Class), BSc&LLB, BSc(ActuarSc) & BASc(AppliedAI) Students
- B. BSc Syllabuses and Regulations (Faculty of Science's homepage)
- C. Online Course Selection System (under Student Information System in the HKU Portal homepage)



Advising in Person

- D. Advisory Office in the Faculty
 - i. Associate Dean (Student Affairs)
 - ii. Administrative Manager
 - iii. Academic Advisers (AAs)
 - iv. Course Selection Advisers (CSAs)
 - v. Student Peer Advisers (SPAs)
 - vi. CEDARS
 - vii. Academic Advising & Scholarships Office (AASO)



Special Events

- E. Faculty Induction Talk
- F. Science Major/Minor Selection Talk Series

- A. Handbook for BSc, BSc&MRes (Science Master Class), BSc&LLB, BSc(ActuarSc) & BASc(AppliedAI) Students

(<https://www.scifac.hku.hk/current/ug/useful-resources/handbooks/student>)

A comprehensive description of the major/minor curriculum requirement, degree regulations, graduation requirements, course selection procedures, examinations and honours classification, major events, and calendar.

- B. BSc Syllabuses and Regulations (Faculty of Science's homepage)

(<https://www.scifac.hku.hk/current/ug/academic/syllabuses>)

- Description of Science majors and minors offered to BSc students.
- Descriptions of courses in Science majors and minors and Science Common Core courses.
- The Regulations for the Bachelor of Science Degree.

- C. Online Course Selection System

(under Student Information System (SIS) in the HKU Portal homepage)

You do not need to declare your major in the first year. The earliest you can declare your major and/or minor (2nd major and minor are optional) is during the course selection period (August) in your second year of study; the latest is after your completion of Year 2 study, i.e., during the course selection period in August before the start of your third year.

Declaration of major-minor is made through the Student Information System (SIS) in the HKU Portal homepage. Each freshman would be offered a login name and password for logging on the SIS (<https://hkuportal.hku.hk/login.html>). You can administer your account information, perform course selection, and access information on University services through the SIS. You can declare your major/minor by the following path: Login to the **SIS** → click **Enrollment** link → click **Declare Major/Minor/Special**. You may change your choice of major/minor option during the course selection (or add/drop) period in each semester as long as the course selection system is opened until the 1st semester of your last academic year for graduation.

Details and procedures for declaration of major/minor can be found in the Handbook for BSc, BSc&MRes (Science Master Class), BSc&LLB, BSc(ActuarSc) & BASc(AppliedAI) Students.

D. *Advisory Office in the Faculty*

The Faculty of Science is responsible for providing general guidance and support, in particular to students who have trouble on identifying their major of study. The Advisory Office in the Faculty consists of the Associate Dean (Student Affairs), Administrative Manager, Academic Advisers, Departmental Course Selection Advisers, and together with other student bodies and departments in the University collectively provide guidance to students on academic-related issues.

i. *Associate Dean (Student Affairs)*

Professor Eddy K F Lam

Address: Faculty of Science Office, G/F, Chong Yuet Ming Physics Building

Tel.: 3917 2683

Email: hrntlkf@hku.hk

ii. *Administrative Manager*

Ms June Tse

Address: Faculty of Science Office, G/F, Chong Yuet Ming Physics Building

Tel.: 3917 2683

Email: junetse@hku.hk



Students are welcome to seek academic advice from Academic Advisers, Course Selection Advisers, Student Peer Advisers, CEDARS and the Academic Advising & Scholarships Office of the University.

iii. *Academic Advisers (AAs)*

AAs are responsible for assisting students with smooth transition from secondary to university education. They help students understand the aims of university education, the culture and ethos of learning at HKU, the available education options and the paths that could be taken so that students can draw their own roadmaps to achieve their goals and monitor their own progress. With the guidance of AAs, students are empowered to think critically, explore available options, and take personal responsibility for decision-making. AAs also offer support to students in formulating their study plan and advise students regarding their intended major.

You can sign up for your preferred Academic Adviser via real-time SIS interface upon your admission to the University. The information of your Academic Adviser will be shown under 'Student Center' of 'Self Service' in the SIS. You can send e-mail to your adviser by simply clicking the 'Send e-mail' icon. You are required to meet with the AA in the first semester of your first year of study.

A list of Academic Advisers can be found at the Faculty website.

iv. *Course Selection Advisers (CSAs)*

You may have questions about a particular Science major/minor including:

- ▶ What is this major/minor about?
- ▶ What are the course contents of this major/minor?
- ▶ What are the scopes of knowledge I can acquire through studying this particular major/minor?
- ▶ How can I make use of the knowledge that I have acquired from this major/minor to pursue my personal/career development?

You may want to seek academic advice from CSAs when you encounter these questions!

CSAs are teachers who are knowledgeable in the courses of particular Science major(s)/minor(s) of their field of expertise. They are representatives from the six departments/school of the Faculty and the School of Biomedical Sciences from which courses of the 14 regular and 7 intensive Science majors are offered. For each major, there are a number of CSAs who can discuss with students about their choice of courses during the course selection period and the course add/drop period. You may also seek their expert advice on choosing your majors and minors. You can visit the Faculty website for the list of CSAs.

Apart from seeking advice, you **MUST** meet a CSA for the following reasons:

- Seek signature of the 'Course Approval Form' when you do not meet the prerequisite of courses or if you have timetable clashes;
- Seek suggestions of replacement courses if a particular course appears in the curriculum of both your double-major or major-minor combination;
- Seek approval for taking course load deviating from normal course load if you wish to take fewer than 24 credits / more than 36 credits in the first/second semester or fewer than 60 credits / more than 72 credits in an academic year (for BSc II or above students only).

v. *Student Peer Advisers (SPAs)*

SPAs are a group of dedicated senior year students who offer advice in relation to academic studies to freshmen and to facilitate freshmen's smooth transition from secondary to university education. A list of Student Peer Advisers can be found at the Faculty website.

vi. *CEDARS*

(<https://www.cedars.hku.hk/>)

The University's Centre of Development and Resources for Students (CEDARS) provides students with a variety of resources and services on personal and career development. You may seek professional advice on career guidance and professional preparation from their Careers Counsellors. CEDARS keeps students updated on career information, summer internship and part-time opportunities, and organizes workshops and career talks to help students prepare themselves for their career challenges. Visit the CEDARS's homepage for tips on career planning and preparation for your interested career.

vii. *Academic Advising & Scholarships Office (AASO)*

Students are also welcome to seek academic advice from the Academic Advising & Scholarships Office (AASO) of the University. The AASO is staffed with an academic adviser and experienced administrators who are there to help students, especially first year students, make a smooth transition to the University and to assist them in developing a meaningful study plan.

Address: Room 212, 2/F, Knowles Building
Tel: 3917 0128
Email: ug.advising@hku.hk
Website: <https://aas.hku.hk>

E. Faculty Induction Talk

Faculty Induction Talk is organized by the Faculty in August for BSc I students. The talk aims to introduce you to the BSc degree structure, advising system, graduation requirement, Faculty regulations, as well as the services provided by the Faculty and HKU that can assist you in formulating your study plan.

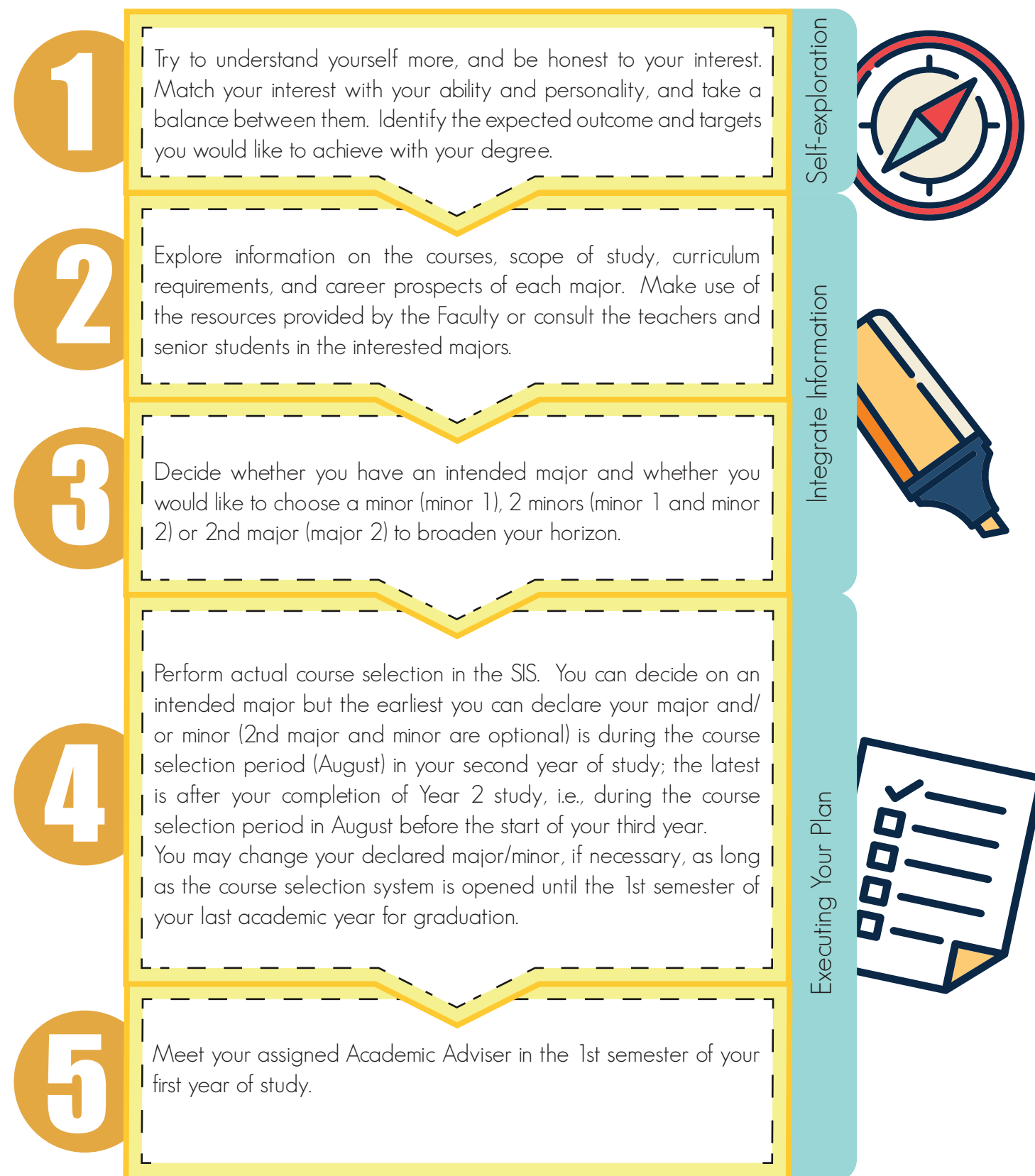
F. Science Major/Minor Selection Talk Series

To facilitate students to have a better preparation for the declaration of major/minor in the course selection period, a Science Major/Minor Selection Talk Series is organized in mid of the second semester of each academic year, which enables you to have a thorough understanding on the course requirements, the selection of courses in different areas of interests, etc.



How to Formulate Your Study Plan? A Step-by-Step Approach

Follow the step-by-step guide below to formulate your study plan in your first year.



FAQs on Major/Minor Selection

1. When do I need to declare major?

The earliest you can declare your major is during the course selection period (August) of your second year of study. The latest time you must declare your major is after the completion of your second year, i.e., during the course selection period (August) before the start of your third year of study. You can change your declared major/minor as long as the course selection system is opened until the 1st semester of your last academic year for graduation.

2. Can I change my major later?

Yes, but you should consider whether:

- a. you are capable of studying a major that is totally new to you;
- b. you have fulfilled the prerequisites of that major and you may have to extend your study;
- c. the courses you have successfully completed can be used towards the new major;
- d. you are indeed going to commit to the major that you will switch to.

3. Would all the credits that I previously took for a particular major be wasted and would I need to start from scratch again if I switch to another major?

A regular Science major requires 96 credits of courses and an intensive Science major requires at least 144 credits of courses (or a higher credit requirement by the accredited bodies). If you switch major, you may have to start with the introductory courses in the major. You should consider carefully whether you can finish your degree on time. The credits that you have already earned can generally be counted as electives. In all cases, you should consider consulting a Course Selection Adviser if you plan to change your major very late in the course of your University study.

4. If I have declared a 2nd major (major 2) or a minor, but I cannot go on to complete the 2nd major or the minor, what should I do?

If you cannot complete the 2nd major or the minor, it would not be shown on the transcript. Nonetheless, it is a good practice to double check if your declared major(s)/minor(s) in the SIS have been updated and make any final adjustment before the closure of the online course selection system in the 1st semester of your final (fourth) year of study. If you have any further queries, you are always encouraged to approach the Faculty Office or a Course Selection Adviser for advice.

5. Do I need to fulfill any requirements to declare a 2nd major (major 2) or a minor?

Some non-Science faculties may set a minimum requirement for their majors and minors offered. Please check details from the relevant Faculties.

6. Who can I ask for advice about major and course selection?

There are Course Selection Advisers (CSAs) for each major who can answer questions related to the particular Science major(s) and individual courses. If you have not made up your mind, you may seek advice from multiple CSAs of your interested majors. You can also visit our Administrative Manager in the Faculty of Science Office.

7. Is there any activity held by the Faculty to introduce information about major and course selection?

Faculty Induction Talk will be held in August for all first year BSc students. It provides students an overview of the BSc curriculum and on course selection.

In addition, a Science Major/Minor Selection Talk Series will be held in mid of the second semester of each academic year to enable you to have a thorough understanding on the course requirements, the selection of courses in different areas of interests, etc.

Schools / Departmental contacts:

Schools / Departments	Location, Telephone and Website
School of Biological Sciences	Rm 6N01, Kadoorie Biological Sciences Building Tel: 2299 0800 Website: https://www.biosch.hku.hk/
School of Biomedical Sciences	1/F, Laboratory Block, 21 Sassoon Road, Hong Kong Tel: 3917 9259 Website: http://www.sbms.hku.hk
Chemistry	Room G01, Chong Yuet Ming Chemistry Building Tel: 2859 7919 Website: https://chemistry.hku.hk/
Earth Sciences	Room 309, James Hsioung Lee Science Building Tel: 2859 1084 / 2857 8558 Website: https://www.earthsciences.hku.hk/
Mathematics	Room 408, Run Run Shaw Building Tel: 2859 2257 Website: https://hkumath.hku.hk/web/index.php
Physics	Room 518, Chong Yuet Ming Physics Building Tel: 2859 2360 Website http://www.physics.hku.hk
Statistics and Actuarial Science	Room 303, Run Run Shaw Building Tel: 3917 2466 Website: https://saasweb.hku.hk/

