Curriculum of BSc&MRes Degrees (*Science Master Class*)

All students admitted to the first year of the BSc&MRes programme in the academic year of 2021-22 and thereafter are required to complete one Science major out of the 7 intensive Science majors as your major for the award of the BSc degree. In addition to the Science major, you may optionally take a minor offered by any Faculty, provided that you fully satisfy the course requirements within the maximum curriculum study load (i.e. 288 credits) of undergraduate courses for the normative period of study. Students should note that some non-Science minors may require students to have achieved a minimum academic result before they are allowed to enrol in them.

To complete the BSc&MRes curriculum, you have to pass not fewer than a total of 303 credits, consisting of not fewer than 240 credits for the Bachelor of Science (BSc) degree and 63 credits for the Master of Research (MRes) degree, normally spread over four years of full-time study for the Bachelor of Science Programme, with the Master of Research integrated into the BSc curriculum from Year 2 onwards.

In your first 2 years of study, the normal course load is 72 credits of undergraduate courses per year, with no less than 30 credits and no more than 36 credits in the first/second semester. You may, of your own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 84 credits in one academic year. You should, however, note that the total number of credits of undergraduate courses taken cannot exceed the maximum curriculum study load of 288 credits (with inclusive of those advanced standing credits and/or transferred credits granted, if any) for the normative period of study. Under normal circumstances, you should take and complete a 3-credit postgraduate course on research ethics (i.e. INRE6033) in year 2.

In your senior years (i.e. 3rd and 4th years) of study, the normal course load is 78 credits of undergraduate and postgraduate courses per year, with no less than 30 credits and no more than 36 credits in the first/second semester. You may, of your own volition, take additional credits not exceeding 6 credits in each semester, and/or further credits during the summer semester, accumulating up to a maximum of 84 credits in one academic year.

(a) The BSc Degree (240 credits):

To complete the BSc degree curriculum, you have to pass at least 240 credits, equivalent to 40 6-credit courses, which comprises:

(i) UG5:
- 2 English courses* and 1 Chinese course^ for university language requirements (18 credits)
- 4 common core courses, including one course from each Area of Inquiry (24 credits)
- any other non-credit bearing courses as required (0 credit)

(ii) Intensive Science major:
- 24 - 25 courses for the intensive Science major including 2 Science Foundation courses#,
  Disciplinary courses and capstone course(s) (144 - 150 credits)
- A choice of 8 - 9 courses as elective courses, or to fulfil the requirements of a minor (36-48 credits)

The intensive science majors available include the followings:
- Biological Sciences (Intensive)
- Chemistry (Intensive)
- Ecology & Biodiversity (Intensive)
- Geology (Intensive)
- Mathematics (Intensive)
- Molecular Biology & Biotechnology (Intensive)
- Physics (Intensive)

The syllabuses of the intensive science majors can be found at https://webapp.science.hku.hk/sr4/servlet/enquiry

You are expected to have 1-year abroad experience in a university for exchange/visiting study and/or conducting research project (e.g. Summer Research Fellowship, Overseas Research Fellowship) in either Year 2 or 3.

Students have to achieve a CGPA of 3.6 or above at the end of Year 2 to remain enrolled in this dual degree programme, or else they have to switch to the 6901 BSc programme.

Notes:

* Students who have been admitted to Year 1 in 2018-19 (and thereafter) and have achieved any one of the following qualifications are exempted from this requirement, and Core University English is optional. Those who do not take this course should take a 6-credit elective course in lieu:
  - Level 5 or above in English Language in the HKDSE
  - holder of a Bachelor's degree from an English-medium university
  - achieved Grade A or above in English Language GCE Advanced Level (AL) / Advanced Subsidiary Level (ASL)
  - achieved an overall IELTS score of no less than 7 AND with all sub-scores no less than 6.5 on the Reading, Speaking, Listening and Writing Tests
  - an overall TOEFL Internet-based test score of no less than 94 AND no less than a 24 on the writing, a 20 on the speaking, a 20 on the listening, AND a 19 on the reading sections
  - achieved in International Baccalaureate (IB) Grade 4 or above in English A1/ English Language A/ English A: Literature/ English A: Language and Literature (HL); or Grade 5 or above in English B/ English Language B (HL); or Grade 5 or above in English A1/ English Language A/ English A: Literature/ English A: Language and Literature (SL)
  - achieved Grade 4 or above on the Advanced Placement (AP) English Language/ English Language and Composition/ English Literature and Composition Test
  - achieved a NEW Scholastic Aptitude Test (SAT) score of 35 or above on both the Writing & Language Test and Reading Test (from 2016)
  - achieved Grade B or above in H1 General Paper at the Singapore GCE A-level
  - achieved Grade A or better in English language at Malaysia SPM examination
  - attained merit (3 points) or above in each set of credits in New Zealand NCEA Literacy (10 credits made up of 5 credits in reading and 5 credits in writing)
  - achieved a score of 95% or better in English at All India Senior School Certificate Examination / Higher School Certificate
  - achieved a final score of 90% or better in English at Grade 12 Canadian high school curriculum
  - achieved Grade B or better in English Language at Sri Lanka Ordinary examination
  - achieved a score of 90 or better in English in the Russian Unified State Exam (Единый государственный экзамен, ЕГЭ, Yedinyi gosudarstvenniy ekzamen, EGE)

- Academic Speaking and Writing test conducted by CAES for students who have not taken any of the above tests
  - When applying to take the Academic Speaking and Writing Test, students should provide evidence to their Faculties and the CAES1000 Course Coordinator that they were admitted to HKU using qualifications other than those included in the above list.
  - Applicants are required to show the evidence of those other qualifications to the assessor on the day of the Academic Speaking and Writing Test.
  - If any applicants fail to provide any evidence that they were admitted to HKU using qualifications other than those included in the above list provided by CAES, the CAES assessor has the rights not to allow the applicant to take the test.
  - The test takes place annually in August. If a student fails to meet the application deadline, they will not have another chance to take the test, as no alternative test dates will be provided.
  - The test is conducted face-to-face. There will be no alternative testing methods available for applicants.
To satisfy the Chinese language enhancement requirement, students are required to successfully complete the 6-credit Faculty-specific Chinese language enhancement course, except for:

(a) Putonghua-speaking students who should take CUND9002 (Practical Chinese and Hong Kong Society) or CUND9003 (Cantonese for Non-Cantonese Speaking Students). They may take the course in Year 1 or 2 if they so wish; and

(b) students who have not studied Chinese language during their secondary education or who have not attained the requisite level of competence in the Chinese language to take the Chinese language enhancement course should write to the Board of the Faculty to apply to be exempted from the Chinese language requirement, and

(i) take a 6-credit Cantonese or Putonghua language course offered by the School of Chinese especially for international and exchange students; OR

(ii) take an elective course in lieu.

Candidates who have been admitted to Year 1 in 2020-21 (and thereafter) and have achieved any one of the following qualifications are exempted from taking SCNC1111:

- Level 4 or above in Mathematics Extended Part Module 1 or 2 in the Hong Kong Diploma of Secondary Education (HKDSE)
- Level 5 or above in Mathematics Higher Level in International Baccalaureate (IB)
- Grade B or above in Mathematics and Further Mathematics in General Certificate of Education Advanced Level (GCEAL)
- Mathematics qualification in Gao Kao will be considered on a case-by-case basis

It is optional for them to take the course SCNC1111. Those who are eligible for exemption and do not take this course in their first year of study should take a 6-credit disciplinary elective course in the science major in lieu.

Candidates who have been admitted to Year 1 in 2021-22 (and thereafter) and have achieved any one of the following qualifications are exempted from taking SCNC1112:

- Level 4 or above in Biology, Chemistry, and Physics in the Hong Kong Diploma of Secondary Education (HKDSE)
- Level 5 or above in Biology, Chemistry, and Physics Higher Level in International Baccalaureate (IB)
- Grade B or above in Biology, Chemistry, and Physics in General Certificate of Education Advanced Level (GCEAL)
- Biology, Chemistry, and Physics qualification in Gao Kao will be considered on a case-by-case basis

It is optional for them to take the course SCNC1112. Those who are eligible for exemption and do not take this course in their first year of study should take a 6-credit disciplinary elective course in the science major in lieu.

(b) The MRes Degree (63 credits):

The MRes of the programme consists of course work and research project. Each student must complete at least 63 credits, including one compulsory course on research ethics, i.e. INRE6033 Research Ethics for Graduate Students (Faculty of Science) (3 credits), 18 credits of Faculty-offered Research Postgraduate courses, and 42 credits of a research project, i.e. INRE7999 Research Project. The project report of the research project will be in the form of a literature review paper and an original research paper in the relevant field. You are expected to take INRE6033 in year 2 and the other postgraduate courses of the MRes component starting from the semester 1 of year 3.

^ To satisfy the Chinese language enhancement requirement, students are required to successfully complete the 6-credit Faculty-specific Chinese language enhancement course, except for:

(a) Putonghua-speaking students who should take CUND9002 (Practical Chinese and Hong Kong Society) or CUND9003 (Cantonese for Non-Cantonese Speaking Students). They may take the course in Year 1 or 2 if they so wish; and

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# Candidates who have been admitted to Year 1 in 2020-21 (and thereafter) and have achieved any one of the following qualifications are exempted from taking SCNC1111:

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- Grade B or above in Mathematics and Further Mathematics in General Certificate of Education Advanced Level (GCEAL)
- Mathematics qualification in Gao Kao will be considered on a case-by-case basis

It is optional for them to take the course SCNC1111. Those who are eligible for exemption and do not take this course in their first year of study should take a 6-credit disciplinary elective course in the science major in lieu.

Candidates who have been admitted to Year 1 in 2021-22 (and thereafter) and have achieved any one of the following qualifications are exempted from taking SCNC1112:

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- Grade B or above in Biology, Chemistry, and Physics in General Certificate of Education Advanced Level (GCEAL)
- Biology, Chemistry, and Physics qualification in Gao Kao will be considered on a case-by-case basis

It is optional for them to take the course SCNC1112. Those who are eligible for exemption and do not take this course in their first year of study should take a 6-credit disciplinary elective course in the science major in lieu.

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- Grade B or above in Biology, Chemistry, and Physics in General Certificate of Education Advanced Level (GCEAL)
- Biology, Chemistry, and Physics qualification in Gao Kao will be considered on a case-by-case basis

It is optional for them to take the course SCNC1112. Those who are eligible for exemption and do not take this course in their first year of study should take a 6-credit disciplinary elective course in the science major in lieu.
Sample study path for BSc&MRes students

**University Education**
(36 credits + non-credit bearing requirement)

**Intensive Majors**
- Biological Sciences (144 credits)
- Chemistry (144 credits)
- Ecology & Biodiversity (144 credits)
- Geology (150 credits)

**Elective Courses**
(54 - 60 credits)

Special tutorials by Grand Masters exclusive for this programme

All opportunities available in our flagship Young Scientist Scheme (YSS) including:
- Entrance Scholarship
- Cambridge -track*
- Summer Research Fellowship
- Overseas Research Fellowship
- Research postgraduate courses (16 credits)
- Research project* (42 credits)

*Only available to Majors in Natural Sciences disciplines
*Subject to initial screening, interviews and tests

*Students are usually expected to spend the summer semester in Year 4 or the first semester in Year 5 to complete the research project for MRes

Total no. of credits: 303
(d) Sample study plans of BSc&MRes Degrees

The typical study plan is illustrated in table (A), with examples of study plans under different scenarios/durations illustrated in table (B) to (E). The sample study plans are for reference only. You can take different number of credits in each semester as long as they can fulfil the minimum total number of credits required upon their graduation.

<table>
<thead>
<tr>
<th>A. Sample study plan for studying within the normative study period</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YEAR</strong></td>
</tr>
<tr>
<td><strong>BSc</strong></td>
</tr>
<tr>
<td>Semester 1</td>
</tr>
<tr>
<td>Semester 2</td>
</tr>
<tr>
<td>Summer Semester</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Sample study plan for top performing BSc students who opt for the BSc&amp;MRes programme in Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>YEAR</strong></td>
</tr>
<tr>
<td><strong>BSc</strong></td>
</tr>
<tr>
<td>Semester 1</td>
</tr>
<tr>
<td>Semester 2</td>
</tr>
<tr>
<td>Summer Semester</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Note: A small number of top-performing BSc students in the 6901 BSc programme will have the opportunity to join this integrated programme under stringent criteria. Eligible BSc students can apply for opt in at the end of their Year 2 study. Eligibility includes having completed 144 credits, and achieved CGPA of 4.0 or above at the end of Year 2.
### C. Sample study plan for students who study beyond the normative study period  
(completion of study in 4.5 years)

<table>
<thead>
<tr>
<th></th>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
<th>YEAR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BSc</td>
<td>MRes</td>
<td>BSc</td>
<td>MRes</td>
<td>BSc</td>
</tr>
<tr>
<td>Semester 1</td>
<td>36</td>
<td>0</td>
<td>30</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Semester 2</td>
<td>30</td>
<td>0</td>
<td>36 (optional exchange study(^\dagger))</td>
<td>0</td>
<td>30 (optional visiting study(^\dagger))</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>0 (optional SRF(^\dagger))</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 (optional ORF(^\dagger))</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>0</td>
<td>66</td>
<td>3</td>
<td>54</td>
</tr>
</tbody>
</table>

### D. Sample study plan for students who study beyond the normative study period  
(completion of study in 5 years)

<table>
<thead>
<tr>
<th></th>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
<th>YEAR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BSc</td>
<td>MRes</td>
<td>BSc</td>
<td>MRes</td>
<td>BSc</td>
</tr>
<tr>
<td>Semester 1</td>
<td>30</td>
<td>0</td>
<td>30</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Semester 2</td>
<td>30</td>
<td>0</td>
<td>30 (optional exchange study(^\dagger))</td>
<td>0</td>
<td>30 (optional visiting study(^\dagger))</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>0 (optional SRF(^\dagger))</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 (optional ORF(^\dagger))</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>0</td>
<td>60</td>
<td>3</td>
<td>54</td>
</tr>
</tbody>
</table>

### E. Sample study plan for students who switch back to BSc programme only in Year 3,  
and graduate in 3.5 years

<table>
<thead>
<tr>
<th></th>
<th>YEAR 1</th>
<th>YEAR 2</th>
<th>YEAR 3</th>
<th>YEAR 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BSc</td>
<td>MRes</td>
<td>BSc</td>
<td>MRes</td>
</tr>
<tr>
<td>Semester 1</td>
<td>36</td>
<td>0</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>Semester 2</td>
<td>36</td>
<td>0</td>
<td>36 (optional exchange study(^\dagger))</td>
<td>0</td>
</tr>
<tr>
<td>Summer Semester</td>
<td>0 (optional SRF(^\dagger))</td>
<td>0</td>
<td>0</td>
<td>(optional ORF(^\dagger))</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>0</td>
<td>72</td>
<td>3</td>
</tr>
</tbody>
</table>
Summer Research Fellowship (SRF), Overseas Research Fellowship (ORF), exchange study and visiting study are optional overseas opportunities that you can participate. The semester and the number of credits shown are for reference only.

(e) Grand Masters and Masters

Students will have the chance to learn from “Grand Masters” and “Masters” of the Faculty of Science. List of Grand Masters and Masters can be found at: https://www.scifac.hku.hk/prospective/ug/6688-science-master-class/experts.