DUAL PhD PROGRAM

Between

HONG KONG BAPTIST UNIVERSITY
HONG KONG, P.R.C.

And

BOARD OF REGENTS OF THE UNIVERSITY SYSTEM OF GEORGIA BY AND ON BEHALF
OF GEORGIA STATE UNIVERSITY
AND ITS COLLEGE OF ARTS AND SCIENCES,
ATLANTA, U.S.A.

1. Parties and Description of Programs

Hong Kong Baptist University (hereinafter "HKBU") has over 60 years of experience in providing broad-based and creativity-inspiring education. It is a research-led liberal arts university that emphasizes a broad, purposeful and student-centered education fit for the 21st century. HKBU spearheads innovative research in sciences as their researchers and student researchers take bold steps to venture into the uncharted fields. HKBU has developed university-focused clusters of research strengths in certain areas, particularly in the areas of Health and Drug Discovery, and has been engaging in inter-disciplinary, innovative and collaborative research to address the issues of both local and global prominence.

Georgia State University (hereinafter "Georgia State"), an enterprising urban public research university, is a national leader in graduating students from widely diverse backgrounds. Centered in the historic financial hub of downtown Atlanta, the university provides more than 54,000 students with unsurpassed connections to the city's research, business, government, nonprofit and cultural organizations. The Department of Biology within the College of Arts and Sciences at Georgia State University offers undergraduate and graduate training programs, and runs research programs coordinated around four main disciplines: Applied and Environmental Microbiology, Cellular Molecular Biology and Physiology, Molecular Genetics and Biochemistry, as well as Neurobiology and Behavior. Specialized research centers and advanced research facilities make Georgia State a major life sciences research institution.

Both HKBU and Georgia State acknowledge the importance of providing high quality education programs to nurture the next generation and have expressed their desire to contribute their expertise to this cause by entering into an agreement to offer a Dual PhD Program. HKBU students will spend two (2) years at HKBU and then then three (3) years at Georgia State.

The purpose of this Agreement is to establish a Dual PhD Program related to Biomedical Sciences within the Biology or Chemistry departments at Georgia State University and Drug Discovery within the Biology, Chemistry and School of Chinese Medicine at HKBU. The objectives of the cooperation are to enhance the competitive advantages and international
standing of both parties, in addition to nurturing outstanding research professionals for Hong Kong and Atlanta areas and beyond for the betterment of society.

2. Term of Agreement

This Agreement will be in force on the date it is duly signed by representatives of both institutions. The Agreement shall be in effect for five (5) years, unless earlier terminated by either party pursuant to Section 11 below. Notwithstanding anything to the contrary contained herein, the term of this Agreement shall not extend beyond one academic year if HKBU or Georgia State assumes any financial obligations by entering into this Agreement and, in no event shall the term of this Agreement extend beyond five (5) academic years. This Agreement may be renewed for additional academic years or five-year renewal terms following assessment if both institutions, acting independently, agree in writing to renew it at least six (6) months before it expires.

3. Number of Students

It is anticipated that a total of between one (1) and four (4) students will be participating at any given time.

This agreement does not require reciprocity, as HKBU and Georgia State will accept only qualified applicants.

4. Recruitment, Curriculum and Graduation

4.1. Student Recruitment and Admission

a. World-wide student recruitment will be carried out by HKBU to identify high quality students.

b. An admission panel will be formed by HKBU and Georgia State for student selection and admission to the two parts of the Program. Applicants shall meet the admission requirements of both institutions. There will be two admission cycles: one to HKBU and one to Georgia State. During the initial admission process to HKBU, Georgia State will participate in pre-screening to identify viable candidates for the Dual PhD Program. Pre-screening would be between HKBU Dual PhD Program Management Committee and Georgia State’s Graduate Directors for the Departments of Biology and Chemistry.

c. Students must fulfill the following requirements for admission:

*HKBU admission requirements*

- A Master’s degree or a Bachelor’s degree with First Class Honors from a recognized university or comparable institution or any other qualification deemed by the Graduate School to be acceptable for this purpose;
- Test of English as a Foreign Language (TOEFL) at a minimum of 550 (PBT) / 79 (IBT) or International English Language Testing System (IELTS) at 6.5;
- Two letters of recommendation; and
- A research proposal deemed to be acceptable for the pursuit of PhD study and for research alignment.
Georgia State admission requirements

Students in the Dual PhD Program will begin their application process at Georgia State at the end of one year of enrollment in the PhD program at HKBU. In addition to the requirements below, during admission to HKBU and especially at the end of the first year of the students' time at HKBU, the Georgia State and HKBU Program Director/s will work on pairing interested mentors (at respective institutions) with complementary expertise and matching project interests such that the student from the HKBU mentor's lab can smoothly transition into Georgia State mentor's lab.

Once the Georgia State mentor has been identified, the appropriate Georgia State Program Director (Chemistry or Biology) will interview the students and ensure that all other selection criteria (for example, coursework equivalency, GPA and any other pertinent requirements in fulfillment of Graduate student status at Georgia State) are met.

Admission to any graduate program at Georgia State University requires a baccalaureate degree from an accredited U.S. institution or its equivalent. Additional requirements for the Dual Ph.D. program include:

- A minimum TOEFL score of 213 (computer-based) or 79 (internet-based) or a minimum IELTS score of 6.5;
- A minimum baccalaureate GPA of 3.5 on a 4.0 scale or a baccalaureate degree classification of First Class Honors or Second Class Honors - Upper Division in the British system or the completion of a Master of Science degree.

Applicants will be required to submit the following supplemental application materials:

- Official transcripts (degree certification and mark sheets) of all previous college or university work, including certified English translations where applicable;
- Official TOEFL or IELTS test scores
- One letter of recommendation from the HKBU supervisor; and
- Research alignment.

No GRE scores are required. Transfer articulation will be on a case-by-case basis. The Program Director will approve the equivalency and transfer of course credits. If HKBU students have enough credits to meet GSU course equivalency, they can be transferred to the dual degree PhD program. In the event that HKBU students do not meet the course equivalency requirements, they will have the option to enroll into a Master's program and can later transfer to the Dual PhD Program. See Section 6 for the financial arrangements.

4.2 Study Location and Timeline

a. The normal study period for the PhD Program in Biology or Chemistry is about five (5) years. Students will be enrolled by HKBU and shall complete the first two (2) years of the Program at the HKBU and the final three (3) years will be at Georgia State. Under exceptional circumstances, further extension of studies of one (1) or two (2) years is permissible. During the first two years, students will be taking both coursework and research credits, according to Appendix A on page 12 (Biology) and Appendix B on page 14 (Chemistry).
b. Participating students will be eligible upon registration to use HKBU and Georgia State’s campus facilities while studying at the respective institutions.

4.3 Curriculum, Regulations, Dissertation and Degree, and Tuition

a. **Curriculum:** The curriculum for the PhD is established prior to the execution of this Agreement and is modifiable only by written agreement, which would not affect the current cohort of students participating in the Program who follow the degree requirements as outlined in the University Catalog at the time of matriculation. The coursework/study plans for Biology and Chemistry are detailed in Appendix A (page 12) and Appendix B (page 14) respectively.

Courses will mainly be delivered in a face-to-face lecture mode, supplemented with experiments and other activities. HKBU and Georgia State will work out a course timetable that is feasible to and agreeable by both parties – see attached Appendices on page 12 (Biology) and Appendix B on page 14 (Chemistry).

b. **Regulations:** All students will be subject to the rules and regulations of the University they are attending, and the laws and procedures of the state or province in which the institution is located. Neither university assumes responsibility for a student’s conduct or lack of compliance with any of the country’s laws. Each University reserves the right to require a student to withdraw from the Program if the student’s academic performance or personal misconduct warrants such action, provided, however, the affiliating University will, absent extenuating circumstances, attempt to consult with the partner University before implementing such action. The dismissal of a student shall not abrogate this Agreement, or arrangements regarding other students. Students should comply with the relevant regulations concerning the postgraduate studies of the two Parties. Should there be any conflict in the aforesaid regulations, the two Parties shall attempt to resolve them in good faith.

i) If a student withdraws or is dismissed and has completed the requirements for a Master’s degree, Georgia State may confer a Master’s degree on the student.

ii) If a student withdraws and has completed the coursework and thesis requirements of an MPhil degree, HKBU may confer the MPhil degree on the student. To fulfill the criteria for MPhil conferment, student will be required to complete 9 units of coursework and the Mandatory Common Core Program [The MCCP should normally be completed in the first year; 2 MCCP courses are credit-bearing (Advanced English for Academic Purpose and Teaching University Students): 3 units in total], present a research prospectus and submit and present an MPhil thesis deemed to be satisfactory by an exam board.

c. **Dissertation and Degree:**

- **Dissertation:**
  i) Qualifying (Candidacy) exam committee will comprise of Georgia State faculty only as per current guidelines and policies of the Chemistry and Biology departments for their graduate students. However, the dissertation committees will include appropriate faculty representation from each
institution. The dissertation committee will be arranged by the Georgia State mentor and will include the Georgia State mentor, HKBU mentor and 2-3 other member experts from Georgia State or other institutions as determined by the Georgia State mentor in consultation with HKBU mentor.

ii) Examinations should be held at Georgia State with full committee participation. Committee members from HKBU can participate by video conferencing. A unanimous vote of all committee members is required for a satisfactory decision.

iii) The dissertation will be written in English with a copy of the final approved version submitted in accordance with the respective guidelines of each institution. Each institution should receive a copy of the final dissertation for archival purposes.

iv) Students who successfully complete all requirements for each degree program will be awarded a PhD from each institution and will receive a diploma issued by each institution.

v) In the event a student's thesis only reaches the standard of a Master's, the students may be awarded an MPhil degree from HKBU. If the student has completed the requirements for a Master’s at Georgia State, Georgia State may confer a MSc degree on the student.

- **Degree:** Students must satisfy the appropriate academic requirements to receive the PhD degree from both institutions. An accompanying statement will contain an explicit reference to the fact that the two universities dually administered the doctoral procedure and indicate that doctoral degrees were awarded by both universities. The respective doctoral documents will entitle the recipient to use either the Chinese or the American form of the doctoral title. In the event, however, that a student satisfies only one institution's requirements, that institution will confer the PhD to that student.

   i) As for HKBU, the requirements for a PhD are as follows: a) 15 units of coursework (including 3 units of MCCP, together with other non-credit bearing MCCP elements); b) confirmation of candidature by means of submitting and presenting a research prospectus considered satisfactory by a panel; and c) submission and presentation of a research thesis deemed to be of PhD standard by an exam board.

   ii) Georgia State's PhD requirements: See Appendices on page 12 (Biology) and Appendix B on page 14 (Chemistry).

d. **Tuition:** The tuition, fees, and research funding of PhD students under the Program shall be processed in accordance with the relevant HKBU rules and regulations while they are studying at HKBU and likewise, in accordance with Georgia State rules and regulations for students while they are studying at Georgia State. Financial assistance (such as fellowships, graduate assistantships, etc.) for the Dual PhD Degree will be determined on an individual basis upon the availability of funds. HKBU will provide subsidized basic healthcare to the students according to its respective general practice at HKBU. Georgia State shall ensure that students purchase approved health/medical insurance approved by the institution of instruction, per Section 8.
4.4 Program Management and Academic Supervision

Georgia State and HKBU shall form a Joint Program Management Committee that comprises the academic coordinators of relevant disciplines. The Joint Committee shall have the right and responsibilities to review and modify the program curriculum, confirm the course equivalencies, advise on assignment/matching of supervisors from both institutions, and other academic matters in relation to the Dual PhD Program. The Joint Committee shall meet at least once a year, either virtually or face-to-face.

The Program follows a dual-supervisor system where supervisors at both institutions will monitor the study progress of PhD students and serve as dual dissertation supervisors. Notwithstanding, the students will primarily be supervised by the HKBU supervisor while studying at HKBU, and by the Georgia State supervisor while at Georgia State.

Students under the Program are required to submit a research progress report twice a year to the co-supervisors at both institutions for review. The Georgia State and HKBU mentors will set up the timing of submission of these reports. The report shall also be forwarded to the Graduate School or relevant authorities of both institutions as part of their academic record.

5. Research and Rights

5.1 Invention and Patent Rights

It is recognized and understood that research, inventions, and technologies owned by Georgia State and existing at the date when this Agreement becomes effective are the separate property of Georgia State, and are not affected by this Agreement, and HKBU shall have no claims or rights in such separate inventions and technologies. HKBU further agrees that any research, inventions, discoveries, or improvements ("Inventions") solely developed by Georgia State arising out of services under this Agreement, or related project agreements with HKBU shall be owned by Georgia State ("Georgia State Inventions").

Similarly, it is recognized and understood that research, inventions, and technologies owned by HKBU and existing at the date when this Agreement becomes effective are the separate property of HKBU, and are not affected by this Agreement, and Georgia State shall have no claims or rights in such separate inventions and technologies. Georgia State further agrees that any research, inventions, discoveries, or improvements ("Inventions") solely developed by HKBU arising out of services under this Agreement, or related project agreements with Georgia State shall be owned by HKBU ("HKBU Inventions").

All inventions developed jointly by Georgia State and HKBU arising out of the services under this Agreement or related joint project agreements between Georgia State and HKBU shall be owned jointly by Georgia State and HKBU ("Joint Inventions"). For joint inventions, Georgia State and HKBU retain all rights to grant exclusive, royalty bearing, worldwide license, including the right to sublicense, to make, have made, use, and sell products incorporating any Georgia State and HKBU Inventions.
5.2 Copyright of Research Thesis

The copyright of the research thesis shall be owned by the student. The student shall make all intellectual property perpetually and freely available to both institutions equally for research and educational purposes, including posting the research outputs generated from the study on the institutional repository of both institutions.

5.3 Right to Publish

Each party reserves the right to publish the results of this Collaboration. Before submission for publication, however, each party shall notify the other of its intention to publish, and shall submit the manuscript to the other party for review and comment. The reviewing party shall have thirty (30) days from receipt of the manuscript to present any written comments to the other party. The reviewing party’s comments shall be given due consideration by the other party. The publication of the results may be delayed at the reviewing party’s written request for a period not to exceed ninety (90) days if it contains a disclosure of an invention(s) on which either party desires to file a United States or other patent. It is understood that in no case can this provision for delay of publication cause a delay in the normal academic progress of a graduate student of either party with respect to preparation and submission of a graduate thesis or dissertation. Any ownership of inventions will be determined pursuant to relevant patent laws and according to contribution of the relevant parties involved, which will be detailed in an agreement for the specific purposes.

5.4 Confidential and Proprietary Information

Georgia State/HKBU recognizes that during the term of this Agreement it may have access to and become familiar with confidential, proprietary, and/or trade secret information owned by the other party. Georgia State/HKBU agrees that during the term of this Agreement and any extensions, except as required to provide services under this Agreement Georgia State/HKBU, shall not directly or indirectly possess, use, convert, copy, duplicate, or misappropriate confidential, proprietary and/or trade secret information and shall not directly or indirectly disclose, communicate, transmit, or transfer any confidential, proprietary, and/or trade secret information to any person or entity. The obligation of non-disclosure shall not apply to: (i) information that is or becomes publicly available through no fault of Georgia State/HKBU; (ii) information that is already independently known to Georgia State/HKBU as shown by its prior written records; (iii) information that is disclosed to Georgia State/HKBU on a non-confidential basis by a third party with the legal right to do so; (iv) information subject to release or disclosure as required by law; or (v) information independently developed by Georgia State/HKBU personnel. All such confidential, proprietary, and/or trade secret information disclosed to Georgia State/HKBU during the term of this Agreement shall remain the property of Georgia State/HKBU and, upon the termination of this Agreement, shall be returned to Georgia State/HKBU. The requirements of this Paragraph shall survive the term of this Agreement and any renewals by three (3) years.

6. Financial Arrangements

Each university may individually provide financial support for students’ tuition, fees, and living expenses to students in this program, subject to the availability of funds. At HKBU this support
may include, if available, studentship (Department graduate research assistantships), PI funds, stipends, fellowships, and/or scholarships, to support students' tuition and various fees and living expenses. Such support, if any, for students during their first two years of stay at HKBU will be provided by HKBU only, with no financial support by Georgia State. During the students' enrollment at Georgia State, students may receive departmental and/or sponsored PI funds, if available, and will be eligible to receive out-of-state tuition waivers by the Department. Financial assistance is not guaranteed and will be granted as available based on the University System of Georgia and Georgia State out-of-state tuition waiver policies and upon availability of funds.

7. **Visas**

Georgia State will provide the necessary documentation (e.g. official letters of admission, immigration documents) for students to apply for a visa to enter and study in the United States. In order to produce this documentation, Georgia State and HKBU will confirm the student list four to five months before the student continues their studies and begins the portion of the Dual PhD Program at Georgia State. Georgia State will update HKBU annually regarding the data and documentation required. It is each student's responsibility to obtain the appropriate visa as required. Students coming to Georgia State are required to obtain an F-1 visa and therefore must provide documentation of sufficient financial resources needed to study in the U.S. Forms and detailed information about this process will be provided by Georgia State's International Student & Scholar Services. Georgia State's Chemistry and Biology departments will assist students with the necessary documentation, where applicable.

This agreement allows on-campus employment of HKBU students in the United States to the extent permissible by law, and by University policies and procedures. Students will follow appropriate steps to obtain authorization of employment and will follow regulations of their student visas and host university.

8. **Areas of Responsibility**

8.1 **Responsibilities of HKBU are as follows:**

- **a.** To recruit and pre-select students for the Dual PhD Program according to Section 4.1 and in general consultation with Georgia State;
- **b.** To forward the applications of pre-selected students to Georgia State for admission after the first year of the Program at HKBU;
- **c.** To forward the visa documentation confirmation 4-5 months before the students' expected arrival on Georgia State's campus;
- **d.** To provide Georgia State with one official final transcript describing the student's academic performance;
- **e.** To provide course advisement to the students who are admitted to the Program; and
- **f.** To advise Georgia State of any circumstances that may affect the students' stay abroad (e.g. known medical problems).
8.2 Responsibilities of Georgia State are as follows:

a. To evaluate students preselected by HKBU for admission into the Dual PhD Program and admit pre-selected students per Section 4.1;

b. To advise and orient admitted students about academic and cultural expectations (such as through pre-departure orientations to convey Georgia State’s student benefits and expectations);

c. To provide HKBU students advisement on courses they need to take for their degree. Each PhD student will be assigned a Georgia State academic supervisor to facilitate this process;

d. To inform the incoming students of all student benefits, to include health insurance requirements and availability; and

e. Upon students’ request (Section 8.3.h), to provide HKBU one official final transcript describing the student’s academic performance and other relevant academic records to HKBU, when required and requested by students.

8.3 Responsibilities of the students are as follows:

a. To pay tuition and fees by published deadlines for attending HKBU and Georgia State that are not covered by research program sponsorship, fellowship or scholarship;

b. With the assistance of Georgia State, obtaining the proper visas and other documents required by the United States government, including any guarantee that they have the financial resources to meet all expenses;

c. To secure necessary health insurance and to pay medical costs;

d. To pay for food, housing, books, fees for class materials, and other educational and personal expenses by published deadlines;

e. To pay the cost of transportation to and from HKBU and Georgia State;

f. To submit any health or immunization records required by Georgia State;

g. To follow the academic rules and guidelines of HKBU and Georgia State;

h. In compliance with the Family Educational Rights and Privacy Act (FERPA), requesting official transcripts to be sent between HKBU and Georgia State;

i. To provide the Program Directors at both Universities emergency contact information; and

j. To make an earnest effort to be successful as a student under the rules and guidelines of each institution.

9. Non-discrimination

The parties agree that no person is excluded from participation under the terms of this Agreement on the grounds of race, color, national origin, sex, or creed.

10. Travel Warning Countries Policy

Georgia State’s Policy on Travel to Countries with Travel Warnings governs travel by Georgia State students, faculty and staff to countries for which the U.S. Department of State has issued a Travel Warning. Travel by faculty, staff and graduate students must be approved by specified Georgia State administrators.
11. Modification, Termination, and Renewal of Agreement

This Agreement may be modified, revised, or renewed but only upon the mutual consent of the Parties through written amendment, signed by both Parties. Either party may terminate this Agreement by written notice submitted at least 90 days in advance of the next academic semester. Termination will not affect existing faculty, researchers or students in the Program. Unless renewed by mutual written consent, this Agreement will conclude at the end of the specified academic term or year (as defined in Section 2 above).

Any student whose agreed upon program of study extends beyond the Termination Date shall be allowed to complete his or her program of study.

12. Program Contacts / Directors

The Primary Contacts/Program Directors will ensure that the terms of this Agreement are carried out. They will serve as the contact persons at each institution, advise the Program participants as needed, ensure that necessary approvals are in place, and have administrative oversight of the Program.

The primary contacts for the parties to this Agreement are the following:

For HKBU

Name: Wing Hong Chan  
Title: Emeritus Professor and Chair  
Department: Dual PhD Program Management Committee  
Address: SCT 1205  
Phone: 852-26880189  
Fax: 852-3411-5133  
Email: whchan@associate.hkbu.edu.hk

For Georgia State University

Name: Ritu Aneja  
Title: Professor and Graduate Director  
Department: Biology  
Address: 614 PSC  
Phone: 404-413-5417  
Fax: 404-413-5301  
Email: raneja@gsu.edu

Name: Vicky Wong  
Title: Senior Assistant Academic Registrar  
Department: Graduate School  
Address: AAB 904  
Phone: 852-3411-7944  
Fax: 852-3411-5133  
Email: vickywong@hkbu.edu.hk

Name: Donald Hamelberg  
Title: Associate Professor of Chemistry and Associate Chair  
Department: Department of Chemistry  
Address: PSC 382  
Phone: 404-413-5564  
Fax: 404-413-5505  
Email: dhamelberg@gsu.edu
WHEREFORE the parties to this Agreement signify their acceptance of the terms and conditions contained herein by signing in the spaces below.

Board of Regents of the University System of Georgia by and on behalf of Georgia State University and its College of Arts and Sciences

[Signature]
Sara Rosen
Dean

24 July, 2017
Date

Hong Kong Baptist University

[Signature]
Rick W. K. Wong
Dean, Graduate School and Vice President (Research and Development)

9 Aug., 2017
Date
APPENDIX A: BIOLOGY STREAM

1. Admission Requirements

a. Qualifying exams: For Biology, students will be taking their qualifying exams (just as other Biology graduate students) after completion of no more than (two) 2 semesters at Georgia State (i.e. after the third year of the Program). The Program Director will set up a three (3)-member qualifying committee from Georgia State faculty. The qualifying committee will not include the HKBU or Georgia State supervisors, however, both supervisors (HKBU in person or by videoconferencing) can attend the oral qualifying exam. The supervisors will have no voting right. A unanimous vote of all Georgia State committee members is required for a satisfactory decision. In the event of an unsatisfactory decision (B- or lower), the candidate will be given one more chance in the following semester to take their qualifying exam. An unsuccessful second attempt will result in the termination of their enrolment in the PhD program.

2. Timeline

BIOLOGY CURRICULUM

YEAR ONE (at HKBU)

- Fall Admission into Program
- Take core courses (detailed below in course requirement section are core courses that are offered for CMBP students to choose from)
- Complete Mandatory Common Core Program
- Take Supervised Research (RPG7010-7050) (the equivalent of Georgia State’s BIOL 8800 and 6900– Directed Research)

YEAR TWO (at HKBU)

- Continue Coursework
- Continue with Supervised Research (RPG7010-7050) (the equivalent of Georgia State’s BIOL 8800 and 6900 - Directed Research)

YEAR THREE (at Georgia State)

- Continue research credits
- Advisement (w/both Research & Area Advisors) Research Rotation (or Lab Assignment)
- Complete Teaching Requirement
- Complete Responsible Conduct of Research
- Continue with Directed Research - BIOL 8800 and 6900
- Qualifying/candidacy exam in June/July
- Submit Dissertation Proposal for Approval in summer

YEARS FOUR & FIVE (at Georgia State)

- Admission to Candidacy
- Nominate Dissertation Committee (Due after qualifying committee exam)
- Enroll in Dissertation Research BIOL 9999
- Hold at least One Meeting a year with Dissertation Committee to evaluate progress
3. Course Requirements

HKBU's general regulations require that PhD students fulfill 15 credit units of coursework, i.e. four 3-unit courses or equivalent, and the Mandatory Common Core Program comprising two compulsory courses and a series of seminars in the first year (i.e. Advanced English for Academic Purposes and Teaching University Students). The College of Arts and Sciences has a maximum of 30 credit hours to be brought into a PhD Program. Students will take two equivalents of Georgia State core courses at HKBU.

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<tr>
<th>Georgia State Core Courses</th>
<th>HKBU Equivalent/Courses</th>
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<tr>
<td>4 core courses for Biology CMBP (Cell Molecular Biology and Physiology) concentration:</td>
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<tr>
<td>BIOL 8220 Advanced Cell Molecular Biology</td>
<td>BIOL 3017/7110 Molecular Biology</td>
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<td></td>
<td>BIOL 7010 Advanced Cell and Molecular Biology</td>
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<tr>
<td>BIOL 8620 Eukaryotic Molecular Genetics</td>
<td>BIOL 4007/7140 Molecular Biotechnology</td>
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<tr>
<td>BIOL 8248 Advanced Cellular Physiology</td>
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<td>BIOL 8278 Molecular Immunology</td>
<td>BIOL 3035/7120 Molecular Immunology</td>
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<td>BIOL 4027/7150 Developmental Biology</td>
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<td>BIOL 3036/7130 Neurobiology</td>
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<tr>
<td></td>
<td>SCIB4005/7010 Interdisciplinary Topics in Science-Cancer Biology, Diagnostics and Therapeutics</td>
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The list above is not exhaustive and may be amended where necessary. New disciplines or courses may be added with agreement of both parties in writing.
APPENDIX B: CHEMISTRY STREAM

1. Admission Requirements

a. Qualifying exams: For Chemistry, students must pass a General Examination consisting of written and oral portions. The written portion will be an American Chemical Society standardized exam (ACS Organic Chemistry) to be administered at HKBU at the end of the second year. If a student fails the written portion of the exam (must receive 90%), the student cannot continue in the program and come to Georgia State. The oral portion will be taken at Georgia State at the end of the third year of the program. The oral Examination Committee will consist of a minimum of three members from the graduate faculty, one of which should be from an area different from the major. The student’s Research Advisors at Georgia State and HKBU are excluded from membership on the Oral Examination Committee. The Director of Graduate Studies selects the members of the General Exam Committee. A student may attempt the Oral General Examination once with the original committee, or a duly constituted new committee. A student who fails the Oral Examination the second time will be terminated from the Program. Both supervisors (HKBU in person or by videoconferencing) could attend - as observers - the second and final attempt of the oral examination.

2. Timeline

CHEMISTRY CURRICULUM

YEAR ONE (at HKBU)

- Fall Admission into Program
- Take courses
- Complete Mandatory Common Core Program
- Take Supervised Research (RPG7010-7050) (the equivalent of CHEM 8910 – Directed Research)

YEAR TWO (at HKBU)

- Continue Coursework
- Continue with Supervised Research (RPG7010-7050) (the equivalent of Chem 8910 - Directed Research)
- General Written Exam in June

YEAR THREE (at Georgia State)

- Advisement (w/both Research & Area Advisors) Research Rotation (or Lab Assignment)
- Complete Teaching Requirement – CHEM 690
- Complete Responsible Conduct of Research - CHEM 8960
- Continue with Directed Research - CHEM 8910
- General Oral Exam in June
- Submit Dissertation Proposal for Approval in summer

YEARS FOUR & FIVE (at Georgia State)

- Admission to Candidacy
- Nominate Dissertation Committee (Due 12/15)
- Enroll in Dissertation Research CHEM 9999
- Hold at least One Meeting a year with Dissertation Committee
- Submit and Defend Dissertation

3. Course Requirements

HKBU's general regulations require that PhD students fulfill 15 credit units of coursework, i.e. four 3-unit courses or equivalent, and the Mandatory Common Core Program comprising two compulsory courses and a series of seminars in the first year (i.e. Advanced English for Academic Purposes and Teaching University Students). The College of Arts and Sciences has a maximum of 30 credit hours to be brought into a PhD Program. Students will take two equivalents of Georgia State core courses at HKBU.

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<tr>
<td><strong>Advanced Organic and Bio-organic Chemistry</strong> <em>(12 hours; Any 4 courses)</em></td>
<td>Since certain students may be HKBU graduates, if they have completed a dual-listed course and achieved a minimum grade of B in their undergraduate studies, then they'll take other courses to be agreed by the Joint Committee.</td>
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<tr>
<td>CHEM 6400 Mechanistic Organic Chemistry</td>
<td>CHEM7xxx Mechanistic Organic Chemistry</td>
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<td>CHEM 6410 Bioorganic Chemistry</td>
<td>CHEM 7780 Bio-organic and Natural Products Chemistry</td>
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<td>CHEM 6330 Advanced Synthesis</td>
<td>CHEM 7790 Organic Synthesis</td>
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<tr>
<td>CHEM 6430 Advanced Synthesis and Mechanism in Organic Chemistry</td>
<td>CHEM 7800 Organometallic Chemistry</td>
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<td>CHEM 8400 Medicinal Chemistry</td>
<td>CHEM 4047/7890 Pharmaceutical Chemistry</td>
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<td>CHEM 4027/7870 Bioanalytical Chemistry</td>
<td></td>
</tr>
<tr>
<td>CHEM 4057/7880 Spectroscopic Techniques for Structure Determination</td>
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<tr>
<td>CHEM 7900 Advanced Synthesis Lab (1.5 units)</td>
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<tr>
<td>CHEM 7940 Group Theory and Bonding (1.5 units)</td>
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<tr>
<td>CHEM 7910 Thermodynamics and Kinetics for Drug Discovery (1.5 units)</td>
<td></td>
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<tr>
<td>CHEM 7930 Coordination and Ligand Chemistry (1.5 units)</td>
<td></td>
</tr>
<tr>
<td>CHEM 7920 Biomedical Imaging (1.5 units)</td>
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</tbody>
</table>
The list above is not exhaustive and may be amended where necessary. New disciplines or courses may be added with agreement of both parties.