

Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) Programs in Bioengineering

Curriculum for Master of Philosophy (MPhil) Program in Bioengineering

The Master of Philosophy (MPhil) program requires completion of at least 12 credits of coursework, including 3 credits of BIEN courses (BIEN 5010 Molecular Biology for Bioengineering, BIEN 5040 Introduction to Bioengineering Research Research or BIEN 5820 Microfluidics and Biosensors), 3 credits from the restrictive bioengineering electives, and 6 credits of non-restrictive elective courses selected from students' chosen area of major concentration.

Students without a degree in Biology or related disciplines, may be required to take at least one additional undergraduate course covering appropriate basic knowledge in life science and obtain a passing grade of C+ or above. Subject to the approval of the Program Director, students may be exempted from this requirement.

All full-time and part-time students are required to take and pass ENGG 6770 Professional Development in Engineering in their first 1.5 years of study. Students may be exempted from certain course events, subject to prior approval of the School. Part-time students may be given extension to complete the course, subject to prior approval of the School.

Full-time students must also complete LANG 5001 Postgraduate English for Academic Purposes. Students may be exempted from taking LANG 5001 with the agreement of the Program Director.

The credits earned from ENGG 6770 and LANG 5001 cannot be counted toward the credit requirements.

Full-time students must take BIEN 6800 Bioengineering Seminar every regular term, and present at least one seminar during their study. They must pass BIEN 6800 three times including once in the term when they present their seminar. Part-time students must take and pass BIEN 6800 at least once in the term when they present their seminar.

In addition, students must complete a thesis in order to demonstrate their competence in bioengineering research. If a student participates in an industrial project and writes a thesis on a work-related topic, the thesis will be supervised jointly by a faculty member of the program and a representative from the participating company.

Curriculum for Doctor of Philosophy (PhD) Program in Bioengineering

The Doctor of Philosophy (PhD) program requires completion of at least 15 credits of coursework, including 6 credits of core courses (BIEN 5010 Molecular Biology for Bioengineering and BIEN 5040 Introduction to Bioengineering Research), 3 credits

from the restrictive bioengineering electives, and 6 credits of non-restrictive elective courses selected from students' chosen area of major concentration. Students are also required to fulfill the school requirements on PhD programs stipulated in the section of *School of Engineering*.

Students without a degree in Biology or related disciplines may be required to take at least one additional undergraduate course covering appropriate basic knowledge in life science and obtain a passing grade of C+ or above. Subject to the approval of the Program Director, students may be exempted from this requirement.

Students entering with a master's or equivalent degree in Engineering or related discipline may be granted credit transfer of up to 6 credits. Students entering with a master's degree in Bioengineering may be granted credit transfer of up to 12 credits, subject to the approval of the Program Director.

All full-time and part-time students must take and pass ENGG 6770 Professional Development in Engineering and BIEN 6770 Professional Development in Bioengineering. Students may be exempted from certain ENGG 6770 events subject to prior approval of the School. Part-time students may be exempted from a maximum of 50% of mini-workshops of BIEN 6770, subject to prior approval of the Program. Students are expected to complete the Professional Development courses in their first two years of study. Subject to approval, part-time students may be given extension to complete the courses. HKUST MPhil (BIEN) graduates who have taken and passed ENGG 6770 before may be exempted from taking the same course, subject to prior approval from the Program Director and PG Coordinator.

Full-time students must also complete LANG 5001 Postgraduate English for Academic Purposes. They may be exempted from taking LANG 5001 with the agreement of the Program Director.

The credits earned from ENGG 6770, BIEN 6770 and LANG 5001 cannot be counted toward the credit requirements.

In addition, full-time students must take BIEN 6800 Bioengineering Seminar every regular term, and present at least two seminars during their study. They must pass BIEN 6800 five times including the terms when they present their seminars. Part-time students must take and pass BIEN 6800 at least twice in the terms when they present their seminars.

To become a doctoral candidate, the student must pass a qualifying examination within the first 1.5 years of study. Upon completion of the course requirement and the thesis, the candidate is required to defend the thesis before a Thesis Examination Committee.