Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) Programs in Information Systems

Curriculum for Master of Philosophy (MPhil) Program in Information Systems

The Master of Philosophy (MPhil) program is a research-oriented degree that aims to prepare students for a research and teaching career in universities, research institutes, governmental or business organizations. The program has a technology management perspective with a focus on economic modeling and behavioral research into the management, design, use, and socio-economic impact of information technology on individuals, organizations, and societies. Students intending to do a Doctor of Philosophy (PhD) in Information Systems at HKUST should consider entering the MPhil program to acquire the training necessary for a PhD.

Program Requirements

a) Introductory Quantitative Requirement

Unless students have clearly demonstrated sufficient knowledge in the area, students entering the MPhil program are required to take the following two mathematics-oriented courses in the first regular term of study. The credits earned from these two courses cannot be counted toward the degree requirements.

ECON 5100 Mathematics for Business and Economics
ISOM 5540 Introduction to Probability

b) Courses Requirement

Students are required to take at least 36 credits in the sequence suggested below. Students may need to take additional courses related to their research topics, as requested by their thesis supervisors.

i. Required Courses (14 credits)

Fall Term, Year One
- ECON 5130 Microeconomic Analysis; or
  ECON 5210 Microeconomic Theory I; or
  ECON 5300 Econometrics
- LANG 5001 Postgraduate English for Academic Purposes

Spring Term, Year One
- ISOM 5020 Information and Technology Management
- ISOM 5550 Statistical Methods for Business and Economics I

Summer Term, Year One
- ISOM 5400 Information Systems Research Methodologies

ii. Year One Elective Courses (a total of at least 16 credits in two years)

Fall Term, Year One
- Research Track courses approved by the MPhil/PhD Coordinator *

Spring Term, Year One
- ECON 5130 Microeconomic Analysis; or
  ECON 5210 Microeconomic Theory I; or
  ECON 5300 Econometrics
- Research Track courses approved by the MPhil/PhD Coordinator *

iii. General Management Courses (at least 6 credits)

Fall Term, Year Two
- ACCT 5100 Financial Accounting Foundations
- FINA 5120 Corporate Finance; or
  FINA 5210 Investment Analysis
- ISOM 5270 Data Mining for Business Intelligence
- MARK 5120 Marketing Strategy and Policy
- MGMT 5230 Management of Organizations

Spring Term, Year Two
- ISOM 5320 Electronic Commerce
- ISOM 5700 Operations Management

Summer Term, Year Two
- ISOM 5460 Project Management

iv. Year Two Elective Courses (a total of at least 16 credits in two years):

Fall Term, Year Two
- For students in quantitative research track
  ISOM 5530 Multivariate Data Analysis

  For students in behavioral research track
  ISOM 5560 Statistical Methods for Business and Economics II

- Research Track courses approved by the MPhil/PhD Coordinator *

Spring Term, Year Two
- Research Track courses approved by the MPhil/PhD Coordinator *

Summer Term, Year Two
- ISOM 7000 Doctoral Seminar in IS #

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* *Students in the quantitative research track need to select PG level courses offered by Economics, Finance, Marketing, or Operations Management programs. Students in the behavioral research track need to select PG level courses offered by Marketing and Management programs.*

\# *Course can be repeated for credits.*

c) Thesis Requirement

- Registration in ISOM 6990 MPhil Thesis Research; and
- Presentation and oral defense of the MPhil thesis.

Curriculum for Doctor of Philosophy (PhD) Program in Information Systems

The Doctor of Philosophy (PhD) programs is a research-oriented degree that aims to prepare students for a research and teaching career in universities, research institutes, governmental or business organizations. The program has a technology management perspective with a focus on economic modeling and behavioral research into the management, design, use, and socio-economic impact of information technology on individuals, organizations, and societies.

Program Requirements

a) Introductory Quantitative Requirement

Unless students have clearly demonstrated sufficient knowledge in the area, students entering the PhD program are required to take the following two mathematics-oriented courses in the first regular term of study. The credits earned from these two courses cannot be counted toward the degree requirements.

ECON	5100	Mathematics for Business and Economics
ISOM	5540	Introduction to Probability

b) Course Requirement

Students are required to take at least 36 credits. Students may need to take additional courses related to their research topics, as requested by their thesis supervisors.

Students who have taken the HKUST MPhil (IS) program will be granted credits transfer to the PhD program. Students who have taken an MPhil or equivalent in other universities may be granted credits transfer on a case-by-case basis. In such a case, the maximum number of credits transferable is 24.

i. General Management Courses (at least 6 credits)

- ACCT 5100 Financial Accounting Foundations
- FINA 5120 Corporate Finance; or
  FINA 5210 Investment Analysis
- ISOM 5270 Data Mining for Business Intelligence
- ISOM 5320 Electronic Commerce
- ISOM 5460 Project Management
- ISOM 5700 Operations Management

- MARK 5120 Marketing Strategy and Policy
- MGMT 5230 Management of Organizations

ii. Required Courses (14 credits)

- ECON 5130 Microeconomic Analysis; or
  ECON 5210 Microeconomic Theory; or
  ECON 5300 Econometrics
- ISOM 5020 Information and Technology Management
- ISOM 5550 Statistical Methods for Business and Economics I
- ISOM 5400 Information Systems Research Methodologies
- LANG 5001 Postgraduate English for Academic Purposes

iii. Elective Courses (at least 16 credits)

- ECON 5300 Econometrics; or
  ECON 5130 Microeconomic Analysis; or
  ECON 5210 Microeconomic Theory
- ISOM 5530 Multivariate Data Analysis
- ISOM 5560 Statistical Methods for Business and Economics II
- ISOM 7000 Doctoral Seminar in IS [#]
- Other Research Track courses approved by the MPhil/PhD Coordinator*

c) PhD Qualifying Examination

All PhD students must pass a qualifying examination.

Students admitted via the HKUST MPhil (IS) program, will take the qualifying examination in the Summer of the second year of MPhil study. Students who fail the qualifying examination in the first attempt can retake the examination once and must pass the examination no later than December of the first year of PhD study.

Students admitted with an equivalent research master's degree will take the qualifying examination in the Summer of the first year or the second year of PhD study. Students who fail the qualifying examination in the first attempt can retake the examination once and must pass the examination no later than December of that same year of PhD study.

[#] *Course can be repeated for credits.*

* *Students in the quantitative research track need to select PG level courses offered by Economics, Finance, Marketing, or Operations Management programs. Students in the behavioral research track need to select PG level courses offered by Marketing and Management programs.*

Students admitted without an equivalent research master's degree will take the qualifying examination in the Summer of the second year of PhD study. Students who fail the qualifying examination in the first attempt can retake the examination once and must pass the examination no later than December of that same year of PhD study.

d) Research Paper Requirement

Students are required to submit a research paper by the end of Summer Term of the second year of study. Students admitted with an HKUST MPhil (IS) degree or equivalent will be exempted from the requirement.

e) Thesis Requirement

- Registration in ISOM 7990 Doctoral Thesis Research;
- Completion of a thesis under the supervision thesis supervision committee comprising at least two faculty members, one of whom is designated as the thesis supervisor and committee chairperson. A thesis proposal presentation will be scheduled only after the thesis supervision committee concludes that a suitable topic has been chosen and sufficient amount of preliminary work has been completed. Once the thesis proposal is approved, the student is then admitted to candidacy and can proceed to complete the thesis in accordance with the agreement; and
- Presentation and oral defense of the PhD thesis.