FACULTY OF ENGINEERING

Information Engineering

Study Scheme

M.Phil. – Ph.D. Programme in Information Engineering (Full-time and Part-time)

(Applicable to students admitted between 2015-16 and 2016-17)

A. M.Phil. Student

1. Coursework Requirement

(a) Lecture courses

Students are required to register and pass at least four courses from the Department of Information Engineering Course List. Courses outside the Department of Information Engineering Course List may be selected on the recommendation of the thesis supervisor and with the approval of the Division Head. The courses need to be taken within the first three terms (or four terms for part-time students) unless with the approval of the Division Head.

(b) Thesis research/monitoring courses

M.Phil. students must register for the relevant thesis research course in every term throughout his/her study period.

- Full-time M.Phil. students: IERG8006
- Part-time and Continuing M.Phil. students: IERG8003

2. Other Requirements

(a) Students must fulfill the Term Assessment Requirement of the Graduate School. For details, please refer to Section 13.0 "Unsatisfactory Performance and Discontinuation of Studies" of the General Regulations Governing Postgraduate Studies which can be accessed from the Graduate School Homepage: http://www.gs.cuhk.edu.hk.

(b) Students are required to submit a research thesis and pass an oral examination for graduation.

(c) Complete an Improving Postgraduate Learning (IPL) module on "Observing Intellectual Property and Copyright Law during Research". This is an online module and relevant information can be accessed from the website: http://www.cuhk.edu.hk/clear/prodev/ipl.html.

Department of Information Engineering Course List

Code	*Course Title*	*Unit*
IERG5020	Telecommunication Switching and Network System	3
IERG5040	Lightwave System Technologies	3
IERG5090	Advanced Networking Protocols and Systems	3
IERG5100	Advanced Wireless Communications	3
IERG5110	Signal Processing in Wireless Communications and Sensing	3
IERG5130	Probabilistic Models and Inference Algorithms for Machine Learning	3
IERG5154	Information Theory	3
IERG5200	Channel Coding and Modulation	3
IERG5230	Algorithms and Realization of Internet of Things Systems	3
IERG5240	Applied Cryptography	3
IERG5290	Network Coding Theory	3
IERG5300	Random Processes	3
IERG5310	Security and Privacy in Cyber Systems	3
IERG5320	Digital Forensics	3
IERG5330	Network Economics	3
IERG5340	IT Innovation and Entrepreneurship	3
IERG5350	Reinforcement Learning	3
IERG5360	Program Representation, Modeling and Understanding for Software Security	3
IERG5380	Quantum Information Processing	3
IERG5590	Advanced Topics in Blockchain	3
IERG6120	Advanced Topics in Information Engineering I	3
IERG6130	Advanced Topics in Information Engineering II	3
IERG6154	Network Information Theory	3
IERG6200	Advanced Topics in Computer Networks	3
IERG6210	Advanced Topics in Information Processing	3
IERG6270	Advanced Wireless Communications	3
IERG6280	Network Economics	3
IERG6300	Theory of Probability	3
IERG8003	Thesis Research	3
IERG8006	Thesis Research	6
IERG8012	Thesis Research	12

Faculty of Engineering Core Course List

Code	*Course Title*	*Unit*
ENGG5101	Advanced Computer Architecture	3
ENGG5103	Techniques for Data Mining	3
ENGG5104	Image Processing and Computer Vision	3
ENGG5105	Computer and Network Security	3

ENGG5106	Information Retrieval and Search Engines	3
ENGG5108	Big Data Analytics	3
ENGG5281	Advanced Microwave Engineering	3
ENGG5202	Pattern Recognition	3
ENGG5282	Nanoelectronics	3
ENGG5291	Fiber Optics: Principles and Technologies	3
ENGG5301	Information Theory	3
ENGG5303	Advanced Wireless Communications	3
ENGG5383	Applied Cryptography	3
ENGG5392	Lightwave System Technologies	3
ENGG5402	Advanced Robotics	3
ENGG5403	Linear System Theory and Design	3
ENGG5404	Micromachining and Microelectromechanical Systems	3
ENGG5501	Foundations of Optimization	3
ENGG5601	Principles of Biomechanics and Biomaterials	3
ENGG5781	Matrix Analysis and Computations	3