Continuing and Professional Development (CPD) Courses on the MSc Programme in Electronic Commerce and Internet Computing

offered by the Department of Computer Science The University of Hong Kong (Issued by the Programme Office in April 2017)

Introduction

MSc(ECom&IComp) Programme

The MSc in Electronic Commerce and Internet Computing programme at the University of Hong Kong was the first of its kind offered in the Asia Pacific region. Established in 1999, it is a one-year full-time and two-year part-time programme designed for business executives, policy and decision makers, managers and information technology professionals to equip them with the latest knowledge and skills about technology development and business opportunities in electronic commerce on the Internet.

Enrolled students could choose from well over twenty core and elective courses which provide state-of-the-art knowledge about the fundamentals of e-business operation and challenge them to analyse past failures and future directions of the networked economy. The curriculum of such courses is reviewed after every round of teaching and enhanced for the next by the expert instructors drawn from the University of Hong Kong and other overseas institutions and from industries.

Opening up the MSc(ECom&IComp) courses for CPD

Our rigorous effort at maintaining the academic quality of our courses is so well known that the Programme Office has received, over the years, continuous enquires from our graduates and the public alike about the possibility of enrolment in single courses for continuing and professional development purpose. The Hong Kong government and professional bodies, as we all know, are also encouraging people to undertake further studies to develop their potentials and improve on their productivity. Therefore the Programme Management Team, after consulting the University, has decided to open up a number of selected MSc(ECom&IComp) courses for public and graduates enrolment.

CPD courses and CPD participants

Information about CPD courses and application for enrolment is published on the MSc(ECom&IComp) programme's website at http://www.ecom-icom.hku.hk.

- Candidates approved to take our courses as CPD courses are called occasional students but are treated as our regular students for the enrolled course in that they can attend lectures, laboratory and tutorial sessions, and be supplied with course materials. However, they will not be examined.

- A Certificate of Attendance signed by the Programme Director and stamped with the name of the Department of Computer Science by the Programme Office of MSc(ECom&IComp) will be awarded to participants who achieves at least 70% attendance.

- Unlike our regular students, CPD participants will not have access to the libraries, Computer Centre facilities and various services provided by the University of Hong Kong.

- No official student card will be issued.

Entrance requirements

- The minimum entrance requirement is a bachelor degree.

- Candidates will be admitted on their articulated keenness for continuous and professional development and on their own confident assessment of their ability to meet the pre-requisites and academic demands of the courses.

CPD course fees

(1) MSc(ECom&IComp) CPD course:
Normal course fee is HK$6,000 per course, and for the programme's graduates who are subscribed MEICOM alumni members, it is HK$3,000.

Note:
1. Course fees are not refundable.

Enquiries

Enquiries should be directed to Miss Ellen Lam
Office: P3-02, Graduate House, The University of Hong Kong, Pokfulam Road, HK
Phone: 3917-1828 E-mail: ellen@ecom-icom.hku.hk

The MSc Programme in Electronic Commerce and Internet Computing

Department of Computer Science
The University of Hong Kong

CPD courses
Enrolment Form
Summer Semester, 2016-17

If you are interested in enrolling in the CPD course(s) on offer*, please study the syllabus to ensure that they meet your needs and that you can handle the demands of the course in terms of pre-requisites and schedule.

Please complete and post the form below and the Personal Information Collection Statement to the Programme Office, enclosing a crossed cheque of the right amount to "The University of Hong Kong" and photocopies of your academic records by May 4, 2017. We will inform you by email, no later than May 10, 2017, the result of your application. Your cheque will be returned if we cannot offer you a place. Upon your acceptance of a place, to facilitate your studies, we will open a special HKU Moodle account for you to access the course materials.

Enquiries should be directed to Miss Ellen Lam
Office: P3-02, Graduate House, The University of Hong Kong, Pokfulam Road, HK
Phone: 3917-1828 E-mail: ellen@ecom-icom.hku.hk

****

To: Programme Office
P3-02, Graduate House, The University of Hong Kong
Pokfulam Road, Hong Kong

Full Name, title:		
HKID No.:		
MSc(ECom&IComp) courses applied to enroll (please tick as appropriate):	**ICOM6027 E-crimes: digital crime scenes and legal sanctions**	
	ICOM6041 An introduction to cloud computing	
	ICOM6044 Data science for business	
Contact phone no.:		
Correspondence Address:		
Email address:		

*Appendix 1-3: Courses and Timetable

Education qualification(s)	
Working experience and current position:	
Are you a graduate of the ECom-IComp programme?	**No /** **Yes** **MSc(ECom&IComp) alumni ( )** **year of admission: degree: year of graduation:**
Reason(s) for wanting to enroll in the course(s)	
Fees enclosed	**(1) Alumni** **( ) MSc(ECom&IComp) course(s) x HK$3,000 = (HK$)** **(2) Others** **( ) MSc(ECom&IComp) course(s) x HK$6,000 = (HK$)**
Name & Signature:	
Date:	

****

THE UNIVERSITY OF HONG KONG

Personal Information Collection Statement

1. This is a statement to inform you of your rights under the Personal Data (Privacy) Ordinance.

2. Personal information is provided by you as an applicant through the completion of application forms designated for various purposes, e.g. for admission to a programme of study, for an exchange programme, for hall admissions, and for provision of facilities or services. Data collected are used specifically for the purposes prescribed in the application forms and will serve

a) as a basis for selection of applicants;
b) as evidence for verification of the applicant's examination results, academic records and other information; and
c) where applicable, as part of the applicant's official student records.

In the case of (c) above, information so incorporated into student files will be used for all purposes relating to the student's studies as required by the relevant regulations and procedures of the University.

3. Personal data will be kept confidential and handled by the University's staff members. The University may transfer some of the data to an agent or other persons appointed to undertake some of its academic and administrative functions.

4. Under the provisions of the Ordinance, you have the right to request the University to ascertain whether it holds your personal data, to be given a copy, and to apply for correction of the data, if deemed incorrect.

5. Applications for access to and correction of personal data should be made by using a special request form and on payment of a fee. Such applications as well as requests for information should be addressed to the Data Protection Officer, Registry, The University of Hong Kong.

Declaration

1. I have noted the general points pursuant to the Personal Data (Privacy) Ordinance.

2. I authorize the University of Hong Kong to use, check and process my data as required for my application.

3. I understand that upon successful application, my data will be a part of my student record and may be used for all purposes as prescribed under relevant rules and regulations as well as attendant procedures, so long as I remain student of this University.

4. I declare that the information given in support of this application is accurate and complete. I understand that any misrepresentation will disqualify my application.

Name

Signature _____

_____

Date _____

Appendix 1

ICOM6027 E-crimes: digital crime scenes and legal sanctions

Instructors	Dr. Kevin Pun Dr. Michael Kwan
Teaching assistant	Mr. Bernard Ng - legal part
Syllabus	This course helps participants to grapple with crimes in the electronic age from both technical and legal points of view. It addresses three important aspects of the subject, namely, technologies adopted in e-crimes, legal sanctions and management of e-crimes scenes. Topics covered include: trends in e-crimes; different types of e-crimes, tools and technologies for committing e-crimes; laws relating to e-crimes and criminal sanctions; digital forensics, post-incident and live-forensic crime scene management, chain of evidence, collecting and collating digital evidence.
Objectives	This course helps participants to grapple with crimes in the electronic age from both technical and legal points of view. It addresses three important aspects of the subject, namely, technologies adopted in e-crimes, legal sanctions and management of e-crimes scenes.
Learning outcomes	On completion of the course, students should be able to 1. Identify and explain the common crimes committed using or involving the computing technology 2. Apply the relevant provisions of the laws of Hong Kong to analyse the crimes referred to in 1 above 3. Demonstrate how to handle and preserve the integrity of digital evidence at the crime scene 4. Demonstrate ethics and professionalism in handling digital evidence
Prior knowledge expected	None
Topics covered	1. Basics of criminal law 2. E-crimes in Hong Kong 3. Law on digital evidence 4. Basic understanding of digital evidence 5. Techniques for digital crime scene management 6. Analysis and reconstruction of digital evidence
Teaching format	Ten 3-hour lectures
Course materials	Notes, with pre- and post-course reading lists of online reference materials.

Session dates		*Date*	*Start Time*	*End Time*
	Session 1	23 May, 2017 (Tue)	19:00	22:00
	Session 2	26 May, 2017 (Fri)	19:00	22:00
	Session 3	29 May, 2017 (Mon)	19:00	22:00
	Session 4	2 Jun, 2017 (Fri)	19:00	22:00
	Session 5	6 Jun, 2017 (Tue)	19:00	22:00
	Session 6	9 Jun, 2017 (Fri)	19:00	22:00
	Session 7	13 Jun, 2017 (Tue)	19:00	22:00
	Session 8	16 Jun, 2017 (Fri)	19:00	22:00
	Session 9	23 Jun, 2017 (Fri)	19:00	22:00
	Session 10	30 Jun, 2017 (Fri)	19:00	22:00

Appendix 2

ICOM6041 An introduction to cloud computing

Instructor	Professor CL Wang
Teaching assistant	Ms Zhang Zhaorui
Syllabus	This course offers an overview of current cloud technologies, and discusses some issues in the design and implementation of cloud systems, and the impact cloud computing on business. Topics include some basic understanding of cluster hardware architecture (e.g., multicore, GPU, high-speed network), cluster middleware for realizing the concept of single system image (e.g., software distributed shared memory) and virtualization techniques (e.g., Xen, KVM, VMWare) used in current data centers. We will discuss three types of Cloud computing platforms, including SaaS, PaaS, and IaaS, by providing motivating examples from major cloud computing players such as Google, Amazon, and Microsoft. We will also introduce Map/Reduce programming paradigm for large-scale data analysis.
Learning outcomes	1. Able to master the key technologies about the Cluster and Cloud Computing, and be able to contrast similar technologies. 2. Able to self-learn the latest Cloud Computing technologies and build their own Cloud system on a PC cluster.
Prior knowledge expected	All enrolled students are expected to have knowledge of operating system and networking. If you wish to undertake the project to build a private cloud, we assume you are familiar with the basic commands for network administration (e.g. ssh, VNC, ifconfig), system configuration (e.g. apt-get/yum/rpm, tar, sudo, make), and text files editing (e.g. vi, nano) under the Linux environment. Due to the time limit, we won't be able to offer tutorials on these basic skills. You must also know at least one programming language i.e. either Java, Python, C or C++, and a basic understanding of the Linux operating system. For those who would like to refresh their knowledge or learn something new in advance to make their study a success, the following resources could be helpful. • The nano text editor: https://wiki.gentoo.org/wiki/Nano/Basics_Guide • The Linux System Administrator's Guide: http://www.tldp.org/LDP/sag/html/index.html (Also, some networking related tutorials) • A list of linux basic command: http://mally.stanford.edu/~sr/computing/basic-unix.html • Xen basics: http://wiki.xenproject.org/wiki/Getting_Started • SSH related: http://en.wikipedia.org/wiki/Secure_Shell • PuTTy Docs/ FAQ: http://www.chiark.greenend.org.uk/~sgtatham/putty/faq.html, http://www.chiark.greenend.org.uk/~sgtatham/putty/docs.html • Tutorial on Amazon EC2: http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html • MapReduce Tutorial: https://hadoop.apache.org/docs/r1.2.1/mapred_tutorial.Html

<table>
<tr><td>Topics covered</td><td>
1. Introduction of Cloud Computing
2. Cloud Service Model (SaaS, PaaS, and IaaS) + Amazon EC2 Tutorial
3. Workshop (1): Xen & Hadoop Installation
4. Hadoop File System (HDFS) and MapReduce
5. Apache Spark
6. Spark Installation Tutorial
7. Virtual Machines and CPU Virtualization
8. I/O Virtualization Techniques
9. Cluster and Data Center Networking
10. Software Defined Network and OpenFlow
</td></tr>
<tr><td>Teaching format</td><td>Lectures</td></tr>
<tr><td>Course materials</td><td>Notes, with pre- and post-course reading lists of online reference materials.</td></tr>
<tr><td>Session dates</td><td>
<table>
<tr><th></th><th>Date</th><th>Start Time</th><th>End Time</th></tr>
<tr><td>Session 1</td><td>15 May, 2017 (Mon)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 2</td><td>17 May, 2017 (Wed)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 3</td><td>31 May, 2017 (Wed)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 4</td><td>1 Jun, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 5</td><td>8 Jun, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 6</td><td>15 Jun, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 7</td><td>21 Jun, 2017 (Wed)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 8</td><td>28 Jun, 2017 (Wed)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 9</td><td>5 Jul, 2017 (Wed)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 10</td><td>7 Jul, 2017 (Fri)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Project demo</td><td>8 Jul, 2017 (Sat)</td><td>14:00</td><td>22:00</td></tr>
</table>
</td></tr>
</table>

Appendix 3

ICOM6044 Data science for business

Instructor	Professor Alan Montgomery
Teaching assistant	Mr. Jason Ma
Syllabus	The emerging discipline of data science combines statistical methods with computer science to solve problems in applied areas. In this case we focus on how data science can be used to solve business problems especially those in electronic commerce. By its very nature e-commerce is able to generate large amounts of data and data mining methods are quite helpful for managers in turning this data into knowledge which in turn can be used to make better decisions. These data sets and their accompanying quantitative methods have the potential to dramatically change decision making in many areas of business. For example, ideas like interactive marketing, customer relationship management, and database marketing are pushing companies to utilize the information they collect about their customers in order to make better marketing decisions. This course focuses on how data science methods can be applied to solve managerial problems in marketing and electronic commerce. Our emphasis is developing a core set of principles that embody data science: empirical reasoning, exploratory and visual analysis, and predictive modeling. We use these core principles to understand many methods used in data mining and machine learning. Our strategy in this course is to survey several popular techniques and understand how they map into these core principles. These techniques are illustrated with case studies. However, the emphasis is not on the software for implementing these techniques but on understanding the inputs and outputs of these techniques and how they are used to solve business problems.
Objectives	• Understand the data mining process • Introduce and understand a set of data mining techniques • Illustrates these techniques to specific case studies for solving business and e-commerce problems
Learning outcomes	Upon completion of this course you will understand the role of data mining in addressing many problems that arise in electronic commerce. 1. You will learn a core set of principles that underlies many data mining techniques, and consider their applications to specific problems like: analyzing clickstream data from web traffic, market segmentation, predicting customer profitability and retention, and analyzing text data from keyword search and social media. 2. You will learn a compatible set of techniques to analyze these problems, such as cluster analysis, linear regression, regression trees, and logistic regression. The focus of this course is on the application and interpretation of the techniques, as opposed to implementing the algorithms.
Prior knowledge expected	It is expected that students understand that this course makes extensive use of statistics and mathematics.
Topics covered	1. Understanding Data and the Data Mining Process 2. Exploring and Visualizing Data 3. Data Based Decision Making 4. Market Segmentation of Customers

<table>
<tr><td></td><td>
5. Predictive Modeling
6. Overfitting and Evaluating Models
7. Pro-Active Churn Management
8. Working with Unstructured Datasets
9. Data Mining Techniques for Prediction
10. Business Strategy for Employing Data Science
</td></tr>
<tr><td>Teaching format</td><td>10 three-hour lectures with prescribed readings to provide important background information for the lectures. Students are asked to complete a considerable amount of computer and analysis work.</td></tr>
<tr><td>Session dates</td><td>
<table>
<tr><th></th><th>Date</th><th>Start Time</th><th>End Time</th></tr>
<tr><td>Session 1</td><td>22 Jun, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 2</td><td>25 Jun, 2017 (Sun)</td><td>14:00</td><td>17:00</td></tr>
<tr><td>Session 3</td><td>29 Jun, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 4</td><td>2 Jul, 2017 (Sun)</td><td>14:00</td><td>17:00</td></tr>
<tr><td>Session 5</td><td>6 Jul, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 6</td><td>9 Jul, 2017 (Sun)</td><td>14:00</td><td>17:00</td></tr>
<tr><td>Session 7</td><td>13 Jul, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 8</td><td>16 Jul, 2017 (Sun)</td><td>14:00</td><td>17:00</td></tr>
<tr><td>Session 9</td><td>20 Jul, 2017 (Thu)</td><td>19:00</td><td>22:00</td></tr>
<tr><td>Session 10</td><td>23 Jul, 2017 (Sun)</td><td>14:00</td><td>17:00</td></tr>
</table>
</td></tr>
</table>