

ISE101x Course Syllabus

General information

The business landscape is changing so rapidly that traditional management, business and computing courses alone do not meet the needs for the next generation of workers in the business world. Focusing on Knowledge Management, Big Data and Cloud Computing and with particular emphases on the intrinsic relationships and the collective power of these three fields, we help to prepare future knowledge workers for the new sources and processes of knowledge creation, the transition to a new mindset and the adoption of tools and systems to exploit opportunities in the new highly connected, knowledge and sharing economy.

Pre-requisite

Nil. No prior technical background is required

Course Dates

Course offering period: Self-paced from July 2nd, 2019 to Jan. 2nd, 2020

Assessments Due Date: All assessments due by 11:59 p.m. (GMT/UMC) Jan. 2nd, 2020

Expected efforts

7-8 hours per week over 8 weeks

Learning objectives

This course is designed to offer learners an introduction to Knowledge Management, its applications in the business world, together with case studies. We also highlight to learners that in an increasingly connected data-rich society, data serves not only in the derivation of new knowledge but also, in the Big Data era, massive data provide alternative paradigms for factual validations and predictive analysis. The Cloud acts as a canvas for the orchestration and delivery of knowledge services that derives new value via the invention of new business models. We would also like our learners to tackle a range of challenging projects by applying the learnt principles and techniques.

Learning outcomes

1. Understand the role of Knowledge Management (KM) practitioners in creating business value
2. Become familiar with the techniques and tools for capturing, processing, classifying and organizing knowledge
3. How to analyze large quantities of data and information through analytics
4. Understand the role of social media and technologies in innovating new business services
5. Apply the principles you have learnt to company-based business projects

Learning content and pedagogy

There are altogether 8 modules in this course. Each module has multiple sections. Typically, for each module, there is an introductory video and then for each section, there is a series of videos, supplemented by suggested readings and quizzes.

Grading Policy

Quizzes are used throughout the course for assessment. All questions carry equal marks. The passing mark is 70% (out of max 100). If you want your effort to be graded, you just need to complete the quizzes by 11:59 p.m., Jan 2nd, 2020 (GMT/UTC).

Discussion

Students are expected to visit the discussion forum at least twice a week. Pre-populated discussion thread(s) on specific topics will appear in the discussion forum each week. Please [observe forum etiquette](#) in all your discussions.

Academic Policy

All learners are required to abide by PolyU's standards of academic integrity. You may review it on pages 59-60 of the [Student Handbook](#).

Module 1	What is Knowledge Management?
	<ul style="list-style-type: none"> 1.1 Introduction 1.2 A Brief History of Knowledge Management 1.3 KM Processes and Frameworks 1.4 KM Tools and Practices 1.5 Technical KM Tools 1.6 Soft KM Tools 1.7 KM Projects and Programs 1.8 Relationship between KM and Big Data
Module 2	KM Tools, Applications and Case Studies
	<ul style="list-style-type: none"> 2.1 Taxonomy & Folksonomy 2.2 Search Engines 2.3 Portal 2.4 Knowledge Audit and Knowledge Transfer 2.5 Change Management 2.6 Hong Kong Police KM Journey
Module 3	KM for SMEs
	<ul style="list-style-type: none"> 3.1 Introduction 3.2 KM Challenges for SMEs 3.3 KMS for SMEs
Module 4	How to leverage the cloud for collaboration and innovation?
	<ul style="list-style-type: none"> 4.1 Introduction to Cloud Computing 4.2 Cloud Services & Cloud-based KM Systems 4.3 The Knowledge Cloud 4.4 Human-machine Co-operative Problem Solving 4.5 Cloud for Learning & the Future of Cloud Services

Module 5	New Developments and Strategic Issues in KM
	<ul style="list-style-type: none"> 5.1 Personal KM 5.2 Applying KM to Project 5.3 Knowledge and Innovation Management 5.4 KM and Design Thinking 5.5 KM and Digitalization 5.6 KM and Industry 4.0
Module 6	What is open, structured & Unstructured Information?
	<ul style="list-style-type: none"> 6.1 Web of Document (Un-Structured Data) 6.2 Web of Data Structured Data – Linked Open Data 6.3 Web of Data - Library Take-up 6.4 Social Media 6.5 Sentiment Analysis 6.6 Semantic Technology 6.7 Science 2.0
Module 7 – Part 1	From Data Warehousing to Data Science & Big Data
	<ul style="list-style-type: none"> 7.1 The basics: Databases and Data Mining 7.2 The Application lifecycle in On-line Business 7.3 Analytics: BI, OLAP, and Advanced Analytics 7.4 Classic Data vs. Big Data 7.5 Principles of Data Governance
Module 7 – Part 2	From Data Warehousing to Data Science & Big Data
	<ul style="list-style-type: none"> 7.6 The Hadoop Stack Ecosystem 7.7 Analytics & Applications and case studies 7.8 Advanced Topics in Big Data Analytics 7.9 Conclusions and Lessons Learned 7.10 Big Data overview (Module Summary and New Frontiers)

