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大數據與物聯網 碩士學位課程

Master of Science in
Big Data and Internet of Things



澳門理工學院
Instituto Politécnico de Macau
Macao Polytechnic Institute

課程概況 Overview

修讀年期：2年
Duration: 2 years

授課語言：英語
Medium: English

課程設置
Programme



師資隊伍
Academic Team



課程亮點 Highlights

- 課程設計針對英國專業工程能力標準（UK-SPEC）的碩士水平
- 培養大數據與物聯網方面的資訊科技專才，推動建設智慧城市
- 由普適計算、無線通信技術、多媒體技術和機器學習等領域的國際聯合實驗室及研究中心提供專業的教學與科研支援
- 有機會參與國際研究項目
- The programme is designed with a target to meet the UK Standard for Professional Engineering Competence (UK-SPEC) at the Master's degree level
- The programme aims to cultivate IT specialists with strong IoT and Big Data technology background in establishing a smart city
- Teaching and research are professionally supported by our joint international laboratories and research centres in the areas of Ubiquitous Computing, Wireless Communication Technology, Multimedia Technology and Machine Learning
- The programme offers opportunities for participating in international research projects

課程目標 Objectives

本課程旨在培養大數據與物聯網有深入了解的專才，能配合智慧城市的建設工作，課程著重啟發學生研發物聯網技術的核心系統架構、通信機制與創新應用，以領先技術進行大數據處理，有效運用與智慧城市應用相關的資訊，開展物聯網與大數據方面的研究。

This programme aims to cultivate IT specialists in Big Data and Internet of Things (IoT) so as to accommodate the development of a smart city. The programme focuses on enlightening the students to develop key system architectures, communication mechanisms for IoT and innovative IoT applications; apply leading-edge techniques for Big Data processing; utilize information relevant for smart city applications; and undertake IoT and Big Data research.

課程設計 Programme Structure *

學科單元及畢業學分要求 Modules and Required Credits		
專業單元 研究方法，物聯網概論，大數據概論， 物聯網通信技術，物聯網多媒體技術， 大數據電子商貿 Advanced modules Research Methodology; Introduction to Internet of Things; Introduction to Big Data; Communication Technology for Internet of Things; Multimedia Technology for Internet of Things; E-commerce with Big Data	+	選修單元 機器學習，安全和認證，雲計算， 數字媒體和社交網絡，特選論題 I， 特選論題 II Electives Machine Learning; Security and Authentication; Cloud Computing; Digital Media and Social Networking; Selected Topic I; Selected Topic II
18學分 / credits	+	論文 Dissertation
36學分 / credits		

* 課堂一般安排於星期一至五下午6時以後及星期六進行。

Classes will be scheduled after 18:00 from Monday to Friday, and on Saturday.

何謂物聯網與大數據？What are the Internet of Things (IoT) and Big Data?

物聯網設備相互連接，以建立智能系統，生成與人們生活各方面息息相關的海量資料。大數據涉及如何使用智能技術收集、儲存、保護、搜尋、分析和視覺化海量和複雜數據的知識。兩者相輔相成，是建設可持續發展智慧城市的關鍵要素。

Thousands of Internet of Things (IoT) devices are interconnected to establish smart systems, generating huge amount of data pertaining to different aspects of human life. Big Data involves the knowledge to use intelligent technology to capture, store, protect, search, analyze and visualize such voluminous and complex data. IoT and Big Data are the key elements in building a sustainable smart city.

職業發展 Career Prospects

畢業生將能成為物聯網與大數據領域的信息技術專才，在業界或政府部門擔任專業職務，並能夠利用物聯網和大數據技術在多個跨學科領域開展深層次研究工作。

Graduates will become IT specialists in the field of IoT and Big Data, taking the related professional positions in the government sectors or the relevant industries, as well as initiating advanced research in multiple scientific domains that utilize IoT and Big Data technologies.

報考條件 Eligibility

有意報考人士須具備以下條件：

- 具電腦學或相關領域之學士學位或同等學歷；或
- 正修讀上述學歷課程最後一年。

Applicants must satisfy one of the following requirements:

- Holding a Bachelor's degree in computing or relevant field or the equivalent; or
- Currently studying in the final year of the programme stated above.

學費及其他費用 Tuition and Other Fees

費用 (澳門幣) ¹ Fees (MOP)				
	澳門學生 Macao Students	香港及台灣學生 Students from Hong Kong & Taiwan	葡語系國家學生 Students from Portuguese- speaking countries	其他外地學生 Other Students
課程全額學費 ² Tuition fee	\$68,000 (≈USD8,500)	\$76,000 (≈USD9,500)	\$80,000 (≈USD10,000)	\$100,000 (≈USD12,500)
宿舍費 (每年) ³ Hostel fee (per year)	不適用 N/A	\$11,350 (≈USD1,500)		
宿舍保證金 ⁴ Hostel deposit	不適用 N/A	\$1,030 (≈USD130)		
醫療保險費 (每年) Medical insurance (per year)	不適用 N/A	\$136 (≈USD17)		

¹ 上述費用如有調整，所有學生均須按新標準繳費。最新收費標準詳見學院網頁。

The above fees are subject to adjustment. All students should pay the prevailing fees announced by MPI on its website.

² 碩士學位課程全額學費在正常修讀期內分兩期支付。

The tuition fees stated in the table above shall be settled in two installments within the normal period of study.

³ 按十個月計算，暑期另外收費。

Charged on a 10-month basis; extra charges for stays during the summer holidays.

⁴ 一次性繳納，退宿時退回。

One-off deposit to be refunded at check-out.

研究生獎學金 Postgraduate Scholarship

考生可申請由澳門理工學院設立的研究生獎學金，有關申請及相關支持文件須與入學申請一同提交，獎學金及相關詳情請見《澳門理工學院研究生獎學金規定》 (ipm.mo/pgscholarships)。

Candidates may apply for the postgraduate scholarship established by the Macao Polytechnic Institute. Application for this scholarship and the relevant supporting documents should be submitted simultaneously when applying for admission. For details, please refer to ipm.mo/pgscholarships.

報名程序 Application Procedures

報考人士須於報名期[#]內到 ipm.mo/admission :

1. 提交入學申請;
2. 繳交報名費 (澳門幣250元) ; 及
3. 上載下列文件:
 - 近照;
 - 身份證明文件; 及
 - 學位證書及成績總表*。

報考人士尚須以郵寄方式向本院提交推薦函兩封。

報名期可於ipm.mo/admission查閱。

* 正修讀學士學位課程最後一年的報考人士, 須上載在學證明及載有所有已完成學科單元/科目的成績總表; 澳門理工學院應屆畢業生豁免此項。

Applicants must complete the following steps at ipm.mo/admission within the application period [#]:

1. Submit online application;
2. Settle application fee (MOP250); and
3. Upload the following documents:
 - Recent photo;
 - Identification documents; and
 - Certificate(s) and academic transcript(s) *.

Applicants are also required to send two reference letters to MPI by post.

For the application period, please refer to ipm.mo/admission.

* Applicants currently studying in the final year of a Bachelor's degree programme are required to submit their most updated academic transcript and testimonial. MPI prospective graduates are not required to do so.

備註: 所有提交之文件應為中、英或葡文本, 其他語言之文件須同時附有由相關發行實體、公證署或領事服務的官方譯本。報名程序在繳妥報名費及提交所需文件後方為有效, 報名費一經繳納 (或多繳) 不予退還或轉讓, 逾期或文件不齊者將視為放棄報考論。

Remarks: All documents should be in Chinese, Portuguese or English; otherwise, an official certified translation should be provided. Applications will only be considered valid after the application fee has been settled and all required documents have been submitted. All fees paid are non-refundable and non-transferable.

入學甄選 Selection

入學甄選將在報名期結束後一個月內進行。考生如須參加面試, 有關學術單位將以電郵方式通知具體安排, 未能參與者將視作放棄報考論。錄取結果將於本院考生平台公佈, 並以之為準。

Selection will be conducted within one month following the end of application period. Should an interview be required, the academic unit concerned shall inform the candidate of the arrangements. Any failure to attend the interview/assessment shall lead to disqualification. The admission offer will be released via MPI's Candidate Portal.

入學規則 Admission Rules

本院研究生課程入學規則詳見ipm.mo/admission。

Please visit ipm.mo/admission for details about the Admission Rules Governing Postgraduate Programmes.

垂詢 Enquiries

課程 Programme

應用科學高等學校
School of Applied Sciences
(853) 8599 3281
esca@ipm.edu.mo

入學 Admission

招生註冊處
Registry
(853) 8599 6111 / 8599 6103
admission@ipm.edu.mo

ipm.mo/admission



微信 WeChat



備註: 澳門理工學院保留開設本課程之最終決定權。

Remark: Macao Polytechnic Institute reserves the right to make the final decision to withdraw any classes.

如有任何更新或修改, 以澳門理工學院公佈為準。

All details given in this publication are correct at the time of going to press. MPI reserves the right to modify or cancel any statement in it when need arises.