**元智大學資訊學院英語學士班 選修科目表**

**International Bachelor Program in Informatics**

**Yuan Ze University**

**List of Elective Courses**

**（109學年度入學新生適用Academic Year 2020）**

109.05.06 一○八學年度第六次教務會議通過

Approved by the 6th Academic Affairs Meeting, Academic Year 2019, on May 6, 2020

109.11.11 一○九學年度第二次教務會議修訂通過

Amended by the 2nd Academic Affairs Meeting, Academic Year 2020, on November 11, 2020

| 學年Year  學期Semester  科目Course | | | 第一學年1st Academic Year | | 第二學年2nd Academic Year | | 第三學年3rd Academic Year | | 學四學年4th Academic Year | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 上Fall | 下Spring | 上Fall | 下Spring | 上Fall | 下Spring | 上Fall | 下Spring |
| 學  士  班  選  修  科  目  Elective Courses | | 資  工  系  Dept.  of  CSE | 普通物理  General Physics  CS152(3) | 電子電路學  Circuit Theory  CS153(3) | 視窗程式設計  Windows Programming  CS249(3) | Java概論  Introduction to Java  CS303(3) | 生物學概論  Introduction to Biology  CS341(3) | 專業實習(二)  Practical Training(II)  IN422(3) | 專業實習(四)  Practical Training(IV)  IN424(3) | 網路實習(二)  Network Lab(II)  CS424(3) |
|  | 電子電路實驗  Electronic Circuits Lab.  CS213(1) | 工程數學  Engineering Mathematics  CS205(3) | 程式語言  Programming Languages  CS223(3) | 車載資料分析與服務  Mobile Data Analysis and Services  CS304(3) | 生物資訊概論  Introduction to Bioinformatics  CS340(3) | 網路實習(一)  Network Lab(I)  CS423(3) | 影像處理概論  Introduction to Image Processing  CS362(3) |
|  |  | 數位系統實驗(一)  Introduction to Digital Systems Lab.(I)  CS254(1) | 高等程式設計  Advanced Programming  CS257(2) | 超大型積體電路設計導論  Introduction to VLSI Design  CS378(3) | UNIX系統概論  Introduction to UNIX System  CS312(3) | 專題製作(三)  Special Project(III)  CS428(4) | 專業實習(五)  Practical Training(V)  IN425(4) |
|  |  |  | 數位系統實驗(二)  Introduction to Digital Systems Lab.(II)  CS255(1) | 計算機圖學概論  Introduction to Computer Graphics  CS314(3) | 積體電路設計  自動化導論  Introduction to IC Design Automation  CS338(3) | 人機互動  設計概論  Introduction to Human-Computer Interaction Design  CS313(3) | 專業實習(六)  Practical Training(VI)  IN426(3) |
|  |  |  |  | 微型應用程式設計實務  Mobile Application Programming  CS322(3) | 開放平台軟體  Open Platform Software  CS381(3) | 專業實習(八)  Practical Training(VIII)  IN428(3) | 專業實習(七)  Practical Training(VII)  IN427(3) |
|  |  |  |  | 雲端運算與服務  Cloud Computing and Services  CS337(3) | 無線網路概論  Introduction to Wireless Internet  CS335(3) | 專業實習(九)  Practical Training(IX)  IN429(3) |  |
|  |  |  |  | 物聯網與微處理機系統設計  Internet of Things and Microprocessor System Design  CS348(3) | 多媒體系統概論  Introduction to Multimedia System  CS401(3) | 專業實習(十)  Practical Training(X)  IN430(4) |  |
|  |  |  |  |  | 敏捷軟體開發  Agile Software Development  CS382(3) |  |  |
|  |  |  |  |  | 醫學概論  Introduction to Clinical Medicine  CS346(3) |  |  |
|  |  |  |  |  | 大數據科學導論  Big Data Science  CS332(3) |  |  |
|  |  |  |  |  | 大數據創新應用專題  Special Projects of Innovative Big Data  CS343(3) |  |  |
|  |  |  |  |  | 人工智慧概論  Introduction to Artificial Intelligence  CS310(3) |  |  |
| 資  管  系  Dept.  of  IM | 資訊與法律  Information and Law  IM409(3) | 資訊社會概論  Introduction to Information Society  IM125(3) | 資訊管理會計  Information Managerial Accounting  IM234(3) | 資訊系統與安全設計  Information Systems and Security Design IM235(3) | 資料庫管理實務  The Design and Implementation of Database Systems  IM321(3) | 知識管理  Knowledge Management  IM336(3) | 企業資源資訊規劃導論  Introduction to Enterprise  Resources  Information Planning  IM434(3) |  |
|  | 總體資訊經濟學  The Economics of Macroinformation  IM130(3) | 資訊科技  英文導論  English for Information Technology  IM229(3) | 全球資訊  發展概論  Introduction of Global Information  IM233(3) | 資訊產業經濟學  Economics of Information Industry IM344(3) | 財務資料  分析專題  Financial Data Analytics  IM339(3) |  | 顧客關係資訊管理  Customer Relationship Information Management  IM436(3) |
| 學  士  班  選  修  科  目  Elective Courses | | 資  管  系  Dept.  of  IM |  | 數據產業概論Introduction on Data Industry  IM131(3) | 數位行銷實務 Digital Marketing in Practice  IM241(3) |  | 資訊安全  管理概論  Introduction to Information Security Management  IM334(3) | 人工智慧應用  Application to Artificial Intelligence  IM304(3) |  | 策略分析  Strategy Analysis  IM437(3) |
|  |  | 管理學  Management  IM106(3) |  | 大數據處理與分析技術  Big Data Management and Statistical Analysis  IM340(3) | 資料探勘  Data Mining  IM341(3) |  | 電子商務  Electronic Commerce  IM410(3) |
| 資  傳  系  Dept.  of  IC |  |  | 電子商務  Electronic Commerce  IC328(3) | 網路資料庫系統 Networks Database System  IC261(3) | 手機遊戲設計  Mobile Game Design  IC334(3) | 電子商務  法律實務  Legal Practice of e-Commerce  IC293(3) | 穿戴式  科技設計(一)  Designing Wearable Technology (I)  IC294(3) | 穿戴式  科技設計(二)  Designing Wearable Technology (II)  IC295(3) |
|  |  | 文創產業個案  Case Study on Cultural Industries  IC249(3) | 網頁遊戲  程式設計  Web Game Programming  IC338(3) |  | 混合實境  Mixed Reality  IC196(3) |  |  |
|  |  |  | 3D電腦繪圖  3D Computer Graphics  IC335(3) |  | 展示科技應用  Exhibition Display Technology  IC297(3) |  |  |
|  |  |  | 敘事與故事 Narrative and storytelling  IC339(3) |  |  |  |  |
| 備  註 | | 1、學士班學生可修習必選修科目來建立以下專業領域：  Students can take courses offered by this program to establish an area of expertise in information technology. The followings are possible areas.   1. 計算機系統：普通物理、電子電路學、電子電路實驗、數位系統實驗(一)、數位系統實驗(二)、組合語言與計算機組織、編譯程式概論、UNIX系統概論、電腦與網路安全概論、內嵌式系統設計與實習、超大型積體電路設計導論、物聯網與微處理機系統設計、積體電路設計自動化導論。   Computer System and Architecture: General Physics, Circuit Theory, Electronic Circuits Lab., Introduction to Digital Systems Lab.(I), Introduction to Digital Systems Lab.(II), Assembly Language and Computer Organization, Introduction to Compiler, Introduction to UNIX System, Introduction to Computer and Network Security, Embedded System Design and Practice, Introduction to VLSI Design, Internet of Things and Microprocessor System Design, Introduction to IC Design Automation.   1. 網路系統：數位系統設計、組合語言與計算機組織、資料通訊概論、無線網路概論、電腦與網路安全概論、UNIX系統概論、網路實習(一)、網路實習(二)、物聯網與微處理機系統設計。   Network System: Digital System Design, Assembly Language and Computer Organization, Introduction to Data Communications, Introduction to Wireless Internet, Introduction to Computer and Network Security, Introduction to UNIX System, Network Lab(I), Network Lab(II), Internet of Things and Microprocessor System Design.   1. 軟體系統：UNIX系統概論、敏捷軟體開發、開放平台軟體、微型應用程式設計實務、電腦與網路安全概論、資訊安全管理概論、資訊系統與安全設計、人機互動設計概論、資料庫管理實務、網路資料庫系統。   Software System: Introduction to UNIX System, Agile Software Development, Open Platform Software, Mobile Application Programming, Introduction to Computer and Network Security, Introduction to Information Security Management, Information Systems and Security Design, Introduction to Human-Computer Interaction Design, The Design and Implementation of Database Systems, Networks Database System.   1. 互動媒體技術：資訊隱私、虛擬實境、行動裝置程式設計、文創產業個案、手機遊戲設計、網頁遊戲程式設計、展示科技應用、混合實境、穿戴式科技設計(一)、穿戴式科技設計(二)、多媒體系統概論、人機互動設計概論、計算機圖學概論、影像處理概論、微型應用程式設計實務、3D電腦繪圖。   Interactive Media Technology: Information Privacy, Virtual Reality, Mobile Device Programming, Case Study on Cultural Industries, Mobile Game Design, Web Game Programming, Exhibition Display Technology, Mixed Reality, Designing Wearable Technology(I), Designing Wearable Technology (II), Introduction to Multimedia System, Introduction to Human-Computer Interaction Design, Introduction to Computer Graphics, Introduction to Image Processing, Mobile Application Programming, 3D Computer Graphics.   1. 物聯網：普通物理、電子電路學、電子電路實驗、數位系統實驗(一)、數位系統實驗(二)、組合語言與計算機組織、電腦與網路安全概論、內嵌式系統設計與實習、無線網路概論、UNIX系統概論、物聯網與微處理機系統設計。   Internet of Things: General Physics, Circuit Theory, Electronic Circuits Lab., Introduction to Digital Systems Lab.(I), Introduction to Digital Systems Lab.(II), Assembly Language and Computer Organization, Introduction to Computer and Network Security, Embedded System Design and Practice, Introduction to Wireless Internet, Introduction to UNIX System, Internet of Things and Microprocessor System Design.   1. 數據科學與人工智慧：數據產業概論、大數據科學導論、物聯網與微處理機系統設計、車載資料分析與服務、大數據處理與分析技術、人工智慧概論、人工智慧應用、資料探勘、決策支援系統、大數據創新應用專題、雲端運算與服務。   Data Science and Artificial Intelligence: Introduction on Data Industry, Big Data Science, Internet of Things and Microprocessor System Design, Mobile Data Analysis and Services, Big Data Management and Statistical Analysis, Introduction to Artificial Intelligence, Application to Artificial Intelligence, Data Mining, Decision Support Systems, Special Projects of Innovative Big Data, Cloud Computing and Services.   1. 資訊應用及創新管理：管理學、管理資訊系統、服務與科技管理、決策支援系統、大數據處理與分析技術、數據產業概論、財務資料分析專題、數位行銷實務、資訊管理會計、資料庫管理實務、資訊安全管理概論、人工智慧應用。   Information Application and Innovative Management: Management, Management Information Systems, Service and Technology Management, Decision Support Systems, Big Data Management and Statistical Analysis, Introduction on Data Industry, Financial Data Analytics, Digital Marketing in Practice, Information Managerial Accounting, The Design and Implementation of Database Systems, Introduction to Information Security Management, Application to Artificial Intelligence.  2、為增進學生英文能力，鼓勵選修英語授課課程(含英專班)，其修習之課程科目及學分數之認抵需依學系規定辦理。  To improve students’ English, students are encouraged to take the courses in English offered by any departments. However, recognition of these courses and their credits is determined by the rules of each adopting department. | | | | | | | |

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