**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**

**（106學年度入學新生適用Academic Year 2017）**

106.01.18 一○五學年度第三次教務會議通過

Passed by the 3st Academic Affairs Meeting, Academic Year 2016, on January18, 2017

108.05.01 一○七學年度第六次教務會議修訂通過

Amended by the 6th Academic Affairs Meeting, Academic Year 2018, on May 01, 2019

| 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.ofCSE | 普通物理(一)General Physics(I)CS149(2) | 普通物理(二)General Physics(II)CS150(2) | 視窗程式設計Windows ProgrammingCS249(3) | Java概論Introduction to JavaCS303(3) | 生物學概論Introduction to BiologyCS341(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) |
|  | 電子電路學Circuit TheoryCS252(4) | 工程數學Engineering MathematicsCS205(3) | 程式語言Programming LanguagesCS223(3) | 車載資料分析與服務Mobile Data Analysis and ServicesCS304(3) | 生物資訊概論Introduction to BioinformaticsCS340(3) | 網路實習(一)Network Lab(I)CS423(3) | 影像處理概論Introduction to Image ProcessingCS362(3) |
|  | 電子電路實驗Electronic Circuits Lab.CS213(1) | 數位系統實驗(一)Introduction to Digital Systems Lab.(I)CS254(1) | 高等程式設計Advanced ProgrammingCS257(2) | 超大型積體電路設計導論Introduction to VLSI DesignCS378(3) | UNIX系統概論Introduction to UNIX SystemCS312(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 GraphicsCS314(3) | 微處理機系統設計Microprocessor System DesignCS320(3) | 人機互動設計概論Introduction to Human-Computer Interaction DesignCS313(3) | 專業實習(六)Practical Training(VI)IN426(3) |
|  |  |  |  | 微型應用程式設計實務Mobile Application ProgrammingCS322(3) | 積體電路設計自動化導論Introduction to IC Design AutomationCS338(3) | 網路攻防Network Security: Attacks and DefensesCS355(3) | 專業實習(七)Practical Training(VII)IN427(3) |
|  |  |  |  | 雲端運算與服務Cloud Computing and ServicesCS337(3) | 開放平台軟體Open Platform SoftwareCS381(3) | 專業實習(八)Practical Training(VIII)IN428(3) |  |
|  |  |  |  |  | 無線網路概論Introduction to Wireless InternetCS335(3) | 專業實習(九)Practical Training(IX)IN429(3) |  |
|  |  |  |  |  | 多媒體系統概論Introduction to Multimedia SystemCS401(3) | 專業實習(十)Practical Training(X)IN430(4) |  |
|  |  |  |  |  | 敏捷軟體開發Agile Software DevelopmentCS382(3) |  |  |
|  |  |  |  |  | 醫學概論Introduction to Clinical MedicineCS346(3) |  |  |
|  |  |  |  |  | 大數據科學導論Big Data ScienceCS332(3) |  |  |
|  |  |  |  |  | 大數據創新應用專題Special Projects of Innovative Big DataCS343(3) |  |  |
|  |  |  |  |  | 物聯網導論Introduction to Internet of ThingsCS347(3) |  |  |
| 資管系Dept.ofIM | 資訊與法律Information and LawIM409(3) | 資訊社會概論Introduction to Information SocietyIM125(3) | 資訊管理會計Information Managerial AccountingIM234(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 SystemsIM321(3) | 知識管理Knowledge ManagementIM336(3) | 企業資源資訊規劃導論Introduction to EnterpriseResourcesInformation PlanningIM434(3) | 資訊網路行銷Information Internet MarketingIM435(3) |
|  | 總體資訊經濟學The Economics of MacroinformationIM130(3) | 資訊科技英文導論English for Information TechnologyIM229(3) | 全球資訊發展概論Introduction of Global InformationIM233(3) | 資訊經濟學Information EconomicsIM328(3) | 財務資料分析專題Financial Data AnalyticsIM339(3) |  | 顧客關係資訊管理Customer Relationship Information ManagementIM436(3) |
| 學士班選修科目Elective Courses | 資管系Dept.ofIM |  | 數據產業概論Introduction on Data IndustryIM131(3) |  |  | 資訊安全管理概論Introduction to Information Security ManagementIM334(3) | 大數據處理與分析技術Big Data Management and Statistical AnalysisIM340(3) |  | 策略分析Strategy AnalysisIM437(3) |
|  |  |  |  | 人工智慧應用Application to Artificial IntelligenceIM304(3) | 資料探勘Data MiningIM341(3) |  | 電子商務技術模式Electronic Commerce Technology ModelIM438(3) |
|  |  |  |  | 資訊人員溝通MIS Professional CommunicationIM337(3) |  |  |  |
| 資傳系Dept.ofIC |  |  | 敘事原理Narrative & Narrative TheoryIC185(3) | 網路資料庫系統Networks Database SystemIC261(3) | 展示科技應用Exhibition Display TechnologyIC297(3) | 電子商務法律實務Legal Practice of e-CommerceIC293(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) |
|  |  | 電子商務Electronic CommerceIC328(3) | 網頁遊戲程式設計Web Game ProgrammingIC338(3) | 3D電腦繪圖3D Computer GraphicsIC335(3) | 混合實境Mixed RealityIC196(3) |  |  |
|  |  | 手機遊戲設計Mobile Game DesignIC334(3) |  |  |  |  |  |
|  |  | 文創產業個案Case Study on Cultural IndustriesIC249(3) |  |  |  |  |  |
| 備註 | 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(一)、普通物理(二)、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、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(I), General Physics(II), 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, 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、微處理機系統設計、資料通訊概論、無線網路概論、電腦與網路安全概論、網路攻防、UNIX系統概論、網路實習(一)、網路實習(二)、物聯網導論。

Network System: Digital System Design, Assembly Language and Computer Organization, Microprocessor System Design, Introduction to Data Communications, Introduction to Wireless Internet, Introduction to Computer and Network Security, Network Security: Attacks and Defenses, Introduction to UNIX System, Network Lab(I), Network Lab(II), Introduction to Internet of Things.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：行銷傳播、資訊隱私、行動裝置視覺介面設計、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: Marketing Communications, Information Privacy, User-Interface Design for Mobile Device, 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(一)、普通物理(二)、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、微處理機系統設計、無線網路概論、網路攻防、UNIX系統概論、物聯網導論。

Internet of Things: General Physics(I), General Physics(II), 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, Microprocessor System Design, Introduction to Wireless Internet, Network Security: Attacks and Defenses, Introduction to UNIX System, Introduction to Internet of Things.1. 數據科學與應用：數據產業概論、大數據科學導論、物聯網導論、車載資料分析與服務、大數據處理與分析技術、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 Its Application: Introduction on Data Industry, Big Data Science, Introduction to Internet of Things, Mobile Data Analysis and Services, Big Data Management and Statistical Analysis, 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(一)、管理資訊系統(二)、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、資訊網路行銷、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(I), Management Information Systems(II), Service and Technology Management, Decision Support Systems, Big Data Management and Statistical Analysis, Introduction on Data Industry, Financial Data Analytics, Information Internet Marketing, Information Managerial Accounting, The Design and Implementation of Database Systems, Introduction to Information Security Management, Application to Artificial Intelligence. |

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