A6-3-1 課程網頁國際化之建置－授課目標
系所：資訊管理系
學程：學士

Course Descriptions of Undergraduate Program
Department of Information Management

Code	Credits	Course Name	Course Description
IM1002	3	Introduction to Computers	This course introduces basic concepts of computer science to freshmen. The content includes introduction of computer, number representation, OS, algorithms, data structure, file systems, database systems, networks and etc.
IM1003	3	Calculus	The main purpose of this course is to let students understand the fundamental principles of the differential integral calculus and its basic techniques of applications. The content involves real numbers, functions and graphs, the derivative and its applications, derivatives of exponential and logarithmic functions, derivative the trigonometric functions, and techniques of integration.
IM1004	3	Accounting	To learn the reporting issues, practices and problems of financial accounting information provided to investors, creditors and other users.
IM1005	3	Computer Programming	The course is basic program training which include the following subjects. 1. Editor and Development Environment 2. Data Type 3. Input／Output4. Selection Statements (if..else, switch)5. Repetitive statements (for, while, do...while, break and continue) 6. Functions or Method 7. Arrays 8. Strings
IM1006	3	Mathematic of Management	1.Systematize the procedure for simplify the problems. 2.Describ the process of mathematical modeling. 3.Develop technique for analyzing models. 4.Linear models:Matrices and its operations. 5.Linear programming models. 6.Financial models 7.Presentation models.
IM1007	3	Management	This course introduces students to the concepts and principles of management. Relevant topics include the fundamental concepts of the management process, organizational structure and functional responsibilities, planning, leadership and control. Practical experience in the management of business operations will be discussed using real-life examples.

IM1008	3	Economics	Real life is an economic life, but traditional economic textbook uses complex mathematic model to explain economic concept. In the class, I will use real life examples to understand economic concept.
IM2002	3	Data Structure	This course will focus on data structures for manipulating them. Data structures for storing information in tables, lists, trees, queues and stacks will be covered. Some basic graph, sorting and searching algorithms will also be discussed.
IM2003	3	Introduction To Information Management	This course will cover the basic concept of information management. The students will understand the concepts of business process and how information technology (IT) can be applied in the business process. Selected introductory topics include the foundation concepts of management information systems, the content of information technology, information system planning and development, business applications (ex. transaction processing system, decision support systems (DSS), strategic information system (SIS), electronic business systems, and management challenges.
IM2004	3	Statistics	The objective of this course is to provide students with an introductory survey of the many applications of descriptive and inferential statistics. The contents include: (1) Introduction. (2) Describing Data: Frequency Distributions and Graphic Presentation. (3) Describing Data: Measures of Location and Dispersion. (4) Probability. (5) Probability Distributions. (6) Estimations. (7) Tests of Hypothesis. (8) Chi-square Test.
IM2005	0	Computer Programming Certification	The goal of this course is to guarantee the students to have the basic programming ability for implementing information systems. The certification is an on-line test and the content is based on the courses of Program Design(1)(2).
IM2006	3	Object-Oriented Analysis and Design	The goal of this course is first to explore and study what a well-developed information system is and how to build it. And then the object-oriented analysis and design, design pattern techniques are discussed. The course will utilize a simple case study to introduce the practical and detail procedure of the OOA, OOD and how to integrate the important object oriented techniques such as design pattern and framework etc. to this study.
IM2008	3	Computer Networks	1. Computer networks terminology & Communication basics 2. Networking and network technologies: Packet switching, framing, Local and wide area technologies,

			Networking addressing, Connection and extension, Measures of delay and throughput, Protocol layers 3. Internets and Internetworking: Internet Protocol (IP) datagram format and addressing, Internet routers and routing, Address binding (ARP), User datagram protocol (UDP), Transmission control protocol (TCP) 4. Network applications: Domain name system (DNS), File transfer protocol (FTP), E-mail transfer (SMTP, POP3), Web technologies and protocol (HTTP, CGI)
IM2009	2	Business English	This course is designed to provide students of English as a Second Language with the language skills to help them interact effectively with colleagues in the workplace. Each unit has one or more topics which everyone faces at work. The course focuses mainly on reading and writing business documents and messages.
IM2020	3	Advanced Computer Programming	This course uses the same program language with program design course. The goal lets students have the ability of to use object oriented programming language to design program. The course includes: (1)Object-Based Programming: object concept, define classes, overloading (2)Object-Oriented Programming: Inheritance, Encapsulation, Polymorphism (3)Input/Output and application of oriented programming design.
IM3001	2	Computer Networks Practice	In laboratory, every students need to construct a simple network, setup the network operating system, and maintain the operation of network server include file server, web server, DNS server, NIS server, etc. There is an operating topic every week.
IM3002	4	Database Management System	This course will introduce the solid and practical foundation for the model, structure, design, query and management of database systems. Moreover, this course will cover data access through Structured Query Language (SQL) and implementation procedures based on ORACLE to let students develop real and useful design skills.
IM3003	3	Special Topics of Information Management	The objective of this course is to provide students with an overall practice of information management applications through the implementation of a special topic on information management. To take this course, several students with similar interests have to form a project team and work together in a selected project. Each project team have to provide document reports of system analysis, system design, system implementation, and system testing and validation.

			Finally, an operable system is also required to complete this course.
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IM3004	2	Technical English	The goal of this course is the improvement of students' ability to read and understand technical English literature. By building the knowledge of commonly used technical vocabulary, phrase, sentence, and grammar, this course helps students to quickly read, understand, and extract important information from materials in a wide range of science and engineering areas.
IM4001	3	Project Management	The goal of this course is to cover not only the concept of project management, but also to give students a solid understanding of the processes, resources control, and implementation of project management necessary to support project managers. This course aims at following directions: (1) project management environment and process, (2) project integration and context management, (3) project cost and quality management, (4) project human resource management, and (5) project communication and risk management.
IM1009	1	Career Planning	The objective of this course is to let the freshmen understand the curriculum, the staffs, the courses, the evnironment, and the resources provided by the school and department of information management. This is a

			guiding course specifically designed for IM students. Team works and open discussions are designed to lead the students for planning their university career.
IM1010	3	Introduction to Unix	The course's objective is to introduce a non-microsoft operating system, i.e., UNIX. This course will focus on UNIX command, shell srcipt, utilities and the environment. For on-lining practicing, the newest version of Linux distribution like Mandriva Linux is used for homework and projects.
IM1011	3	Marketing Management	The goal of the course of Marketing Management is primarily that takes an exciting new direction in its quest to guide new marketing students down the intriguing, discovery-laden road to learning marketing . And we attempt to help students master the basic concepts and practices of modern marketing in an enjoyable and practical way . Achieving this goal involves a constant context for the best balance among the "three pillars" that support the text ---theories and concepts, practice and applications, and pedagogy.
IM1012	3	Management accounting	This course will introduce how to deal wtih costs in the business and discuss some hot issues in management accounting.
IM1013	3	Internet Programming	1.HTML syntax 2.JavaScript introduction 3.Basic PHP syntax 4. Expression Language 5. Form processing and Cookie 7. PHP with database 8. Advanced topics of PHP 8.AJAX
IM1014	3	Human Resource Management	This course introduces the basic concepts and practices of human resource management, including recruitment and selection, training and development, performance appraisal, compensation and benefits, and labor relations. The student will acquire the knowledge of the role and function of HRM in organization.
IM1015	2	Introduction to Multimedia	The course introduces the base concepts of multimedia. The course will introduce various multimeida elements and the relation between the elements and elements. The implementaion will be used to confirm the multimedia theory.
IM1016	1	Information Ethics Lecture	In this course, we will study the ethical issues arising from the development and application of information technologies. This course will introduce the concepts of information ethics, intellectual property right, personal privacy, computer crime, information security and etc. It will lead students to have right intentions for using computer in the network.
IM1030	2	Free Software and Free	Free software gives users four freedoms: freedoms to

		Culture	execute,study, distribute, and improve the code. These philosophical and seemingly theoretical ideals eventually brought about very practical consequences such as the freedom of "20 gram notebook computer", to GNU/Linux users. It also inspired a law professor to reflect upon the uncontrolled expansion of the "intellectual property rights". The result is the free culture social movement that challenges such expansion. In this class, we also discuss the development model, educational applications, meanings to digital divide, and the diffusion into campuses of free software.
IM2010	3	Windows Programming	This course will guide students how to design program in windows environment . First we will chose one development tool, focus on this tools to develop graphic user interface program , MDI application, ,and database application .
IM2011	3	Scripting design	The need for scripting is growing in response to the trend of hardware becoming ever faster and software crystalizing into components. We use one of shell/perl/python/tcl/php/ruby/javascript to illustrate how to combine and permute existing system commands or software components. The objective is to elimante the need for repetitive and mechanical mouse clicking by developing one-time scripts in a very short time. The universal concept of regular expressions, being independent of operating systems and of programming languages, is emphasized in text processing.
IM2012	3	Operation Management	This course introduces theories, strategies, and decisions about operations management, including such topics as operations strategies, process management, supply-chain management, demand forecasts, inventory management, aggregate planning, scheduling, material requirement planning, resources and capacity management, future trends, and various case studies and applications. The objectives are to help students fully understand how to be an effective manager in the competitive and global environment, and how to use the theories, techniques, and tools of operations management to improve the quality of business processes and various management decisions.
IM2013	3	Multimedia Applications	The course will introduce how to develop a multimedia

			system. The development relative tools will be described. A prototype system will be implemented in final job of the course. It will integrate the functions of input / output audio and video signal, image processing and system integration.
IM2015	3	Operations Research	This course is about the use of quantitative models to aid in managerial decision making. An emphasis is placed on understanding the management science models and utilizing the results of these models in a way that is meaningful to a decision maker
IM2017	3	Introduction to Algorithms	In this course, we study methods for sorting, recursion,dynamic programming, greedy algorithms, ...etc. In continuation of the data structures course, we also study algorithms for balanced trees and graphs. The contents of the course are as follows: 1.Introduction 2.Divide-and-Conquer 3.Dynamic Programming 4.Greedy Algorithm 5.Backtracking 6.Branch-and-Bound 7.Complexity Computation 8.NP Theory.
IM2018	3	Practice of Image Processing	The major goal of the course is to introduce the basic operation and the basic principle of the digital image. The course will use Abobe Photoshop software to implement the operations for the digital image.
IM2021	3	Advanced windows programming	TSpecific Components, 5.Advanced Inheritance, Component, And Editor Issues, 6.Threads, 7.Databases and BDE, 8.Windows API And Devices, 9.Other Programming Libraries This course extends the course "Windows Programming" with advanced topics such that the students have further understanding of the programming technique on Windows environment. Demonstration and practice are the key issues. The students will learn and exercise the programming on Windows. Issues included in the course are the followings. 1.The Basics, 2.Philosophy, 3.Techniques and Patterns, 4.Using Or Adapting Specific Components, 5.Advanced Inheritance, Component, And Editor Issues, 6.Threads, 7.Databases and BDE, 8.Windows API And Devices, 9.Other Programming Libraries
IM2022	2	Desktop Environment Using Only Free Software	1. Concepts of Free Software. 2. Advantages of Free Software. 3. Customizing the Desktop. 4. File System. 5. Networking. 6. OpenOffice.org. 7. Games. 8. Installating/Removing/Upgrading Applications. 9. Displaying/Creating/Scanning Images. 10. Playing/Editing/Composing/Recording

			Sound Files. 11. Where to Find Gratis and Paid Resources. 12. Disk Partitioning and Dual Boot.
IM3006	3	Financial Management	1.To introduce the basic concepts & tools of financial manegement,including financial statements & analysis,time value of money,risk & return and securities valuation.2.To examine long-term investment dicisions & ficnancial decision 3.To study short-trem financial decisions & other special topics in managerial finance.
IM3007	3	Computer Animation	The theory and practical design of computer animation will be introduced. The entire process of computer animation theory will be covered. This process includes the geometry modeling, re-shape / modification of the objects, animation variables setup (including the motion path, lighting, shading, texture mapping, transforming system, video post,…and so on). Also, the basic concepts of computer graphics and multimedia design will be introduced. The computer software of 3D Studio Max will be used to illustrate the examples. The students need do the exercises and homework on the IBM compatible PC to fully understand the computer animation process. A final project, integrated with the techniques discussed in class, needed to be turn in for the final grade.
IM3008	3	Introduction to Operating Systems	This course will cover the basic concept of operating system. Selected topics include operating system structure, process management, scheduling and synchronization, deadlock, memory management, file system, storage management, protection and security, distributed system.
IM3010	3	Discrete Mathematics	An important goal of this course is to develop student's ability to think logically. This course will introduce the concept of logic, the language of mathematics, mathematical induction, set theory, fumction, counting methods, the pigeonhole principle, recurrence relation, and graph theory.
IM3012	3	Distributed Data Processing	Introducing data processing methods and technologies among computers in the distributed network environment, including IPC and SOCKET etc. Using JAVA language as the implementation platform of internet programming.
IM3013	3	Information Security	This course will introduce the basics of number theory, symmetric key/public key cryptosystem, and the applications. The applications includes secret sharing, authentication, e-mail security, signature, blind

			signature, etc.
IM3016	3	Applications of Computer Networks Engineering	The CCNA(Cisco Certified Network Associate) course will certify that the successful student has important knowledge and skills necessary to select, connect, configure, and troubleshoot the various Cisco networking devices. The course covers topics on Extending Switched Networks with VLANS, Determining IP Routes, Managing IP traffic with Access Lists, Establishing Point-to-Point connections, and Establishing Frame Relay Connections.
IM3018	3	Virtual Reality System	In this course we will introduce the development of the VR and implement a 3D interactive system. we will create 3D models and scenes using a 3D modeling tool. In the final project the student will realize a system using a real time 3D engine to manipulate 3D objects and camera in the scene, and practice the effects of collision detection.
IM3019	3	Introduction to Information Hiding	Two main topics will be discussed in this course: steganography and digital watermarking. There has been a number of information hiding techniques since the development of human civilization, for example, invisible characters written with special ink, information hidden via rearrangement of the words in a seemingly normal article, and information hidden in microfilms, etc. How will these techniques be implemented in the digital era? How to transmit secret messages through the Internet without causing any notification? On the other hand, hand written signatures were usually used in the past to assert the copyrights of intellectual properties. As they are obviously infeasible for digital products, how to protect the products' integrity and copyright, especially when they can be easily modified? These types of digital problems will be fully discussed in this course. Information hiding is a new area which combines research areas of image processing, information security, information theory, statistics, and so on. It is a new and interesting research topic.
IM3020	3	Introduction to RFID information system	The technology of Radio Frequency Identification (RFID) has been widely applied in the various industries. The objective of the course is to introduce the basic elements for building RFID information systems. These basic elements will cover, but not limit, the RFID information framework, middleware, database design, and the deployment and verification of the RFID system.

IM3021	3	Data Warehouse	1. Introduction of Distributed DBMS 2. Overview of Relational DBMS 3. Review of Computer Networks 4. Distributed DBMS Architecture 5. Distributed Database Design 6. Query Distributed Processing 7. Transaction Management
IM3022	3	Artificial Intelligent	Artificial Intelligence (AI) is a big field. This course has tried to explore the full breadth of the field. The main unifying theme is the idea of an intelligent agent. This course define AI as the study of agents that receive percepts from the environment and perform actions. The topics included are: 1. Introduction 2. Intelligent Agents 3. Solving Problems by Searching 4. Logical Agents5. First-Order Logic6. Uncertainty7. Learning from Observation8. Communication 9. AI: Present and Future.
IM3023	2	Social Aspects of the Live USB Technology	Computers didn't have harddisks back in the 1980's. The OS, word processor, rescue tools... etc. all fit into one 1.44MB floppy disk. One carries along the entire personalized environment (albeit very simple) whereever one goes. Now we have 1G usb keys which have 700 times larger capacity than a loppy disk. Such keys are almost good enough to replace harddisks. What would the world be like if everyone carries her own Live USB just like rrying a 20 gram notebook computer?
IM4002	3	Introduction to Software Engineering	This course will cover various advanced topics of software engineering, including software development models, software project management, real time and distributed software development techniques, software testing techniques, software maintenance issues, and software re-engineering.
IM4003	3	Financial Information Systems	This course will introduce the basic concept of financial information systems and financial applications of both Data Systems Workflow ERP and Oracle ERP. The topics included are: 1. Introduction 2. The Accounting Information System 3. Financial Information Systems 4. The Trend of ERP 5. Financial Applications of Data Systems Workflow ERP 6. Financial Applications of Oracle ERP
IM4005	3	Introduction to Electronic Commerce	The purpose of this course is to teach students that the Electronic Commerce (EC)is a multidisciplinary science that includes four aspects. These are computer science, business management, marketing and legal issues. Through course teach, students know how EC

			runs in real world.
IM4006	3	Object-Oriented Database Management System	Since object-oriented DBMS is easier than traditional DBMS in describing and maintaining a complex database, it is gradually popular in enterprises recently.This course will introduce object-oriented DBMS about the model, structure, design, application, management, and implementation.
IM4009	3	Marketing Information Management	The major subjects of this course are as follows： As marketing environments become more complicated, market scopes keep expanding, business face keen market competitions. Marketing managers need sufficient, timely, and reliable marketing information as references for making marketing decisions and plans. The topics of this course are comprised of value of marketing information, marketing information system, research planning, marketing information gathering, analysis of marketing information, and predictions using marketing information. The emphasis is on the collection and analysis of marketing information. Important concepts and techniques which includes questionnaire design, experiments design, visiting, and various statistic methods will be lectured. These issues provide appropriate marketing information and the quality of marketing decisions is increased. In summary, the correctness of marketing decisions lie on the provision of complete marketing information. The objective of this course is to give an in-depth understanding of various concepts and techniques of marketing information, which can be applied to improve the efficiency and performance of marketing decisions.
IM4011	3	Total Quality Management	Total quality is approached from the organizational culture and a culture change perspective. In the 21st century customers expect quality and continuous improvement is a requirement. The student will develop a practical approach for initiating total quality to achieve organizational excellence. The student will gain practical experience with quality issues and the tools to design, implement, and sustain total quality programs. The student should develop the foundations for understanding a number of quality systems and management concepts that are common today and assumed to be a part of a world class, global organization. These include ISO 9000 and 14000 programs, Baldrige Awards, Six Sigma, Project Management, and Strategic Planning.

IM4012	3	Network Management and Programming	This course will cover basic network security and management issues. Subjects include data encryption and decryption, network security protocol, firewall, network management architecture, network management protocol, etc.
IM4013	3	Operations Information Systems	Main contents include: 1. Introduction to Production and Operations Information Management 2. E-Business and Reengineering 3. Lab: ERP Systems Production Modules (Oracle, Workflow ERP)
IM4015	3	Decision Support System	The purpose of this course is to explain and discuss the way of making best decision. The following contents are taught in this course. (1) The secret of decision support systems; (2) How to develop and deploy decision support systems; (3) The characters of administrators' decision making systems; (4) The deployment of business intelligence; (5) The decision support systems in Internet-era; (5) The development of intelligent systems for knowledge management.
IM4016	3	Mobile commerce systems	With the emergence and wide spread adoption of wireless and mobile networks and devices, mobile commerce applications are beginning to attract many attentions to industries and academies. Mobile commerce may require significantly different approaches in design, development, and implementation of applications due to the inherent characteristics of wireless networks and mobile devices. This course provides an introduction to mobile commerce, including frameworks, applications, requirements, location-based services (LBS), security and payment, and business model and emerging m-commerce services. Furthermore, the course will be introduced to implemented mobile commerce systems using J2ME language.
IM4018	3	Multimedia Application Systems	The course introduces about important design techniques and tools of multimedia system design, its goal is to train the students for implementing a practical multimedia program. The content of this course includes the concept of multimedia, the script design, the processing of image, audio and vedio, the animator design, the interactive design, etc.
IM4021	3	Logistics and Supply Chain Systems	Supply Chain Management (SCM) is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. The objectives of this course are designed to teach students the basic concepts of SCM and the core strategies of SCM, including: 1.Identify what supply

			chains the firm wants to compete in. 2.Help managers understand how the firm will provide value to the supply chain. 3.Guide the selection of supply chain partners, including suppliers, subcontractors, transportation providers, and distributors.
IM4022	3	Information Management Practice	The purpose of this course is to arrange practical training opportunity for students that can help students get involved in daily operations of enterprises. Course contents include selection of case study, planning of practical training, cultivation of students' professional skill in information management.
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IM4023	2	Employment and Learning in Information Industry	After many years studing in compter technology, the objective of the course is to help students to get a good job in information industry.　It includes how to select a company, how to　apply a new job, how to interview with employer　and so on.　　In addition, it will promote the students ability of himself/herself leraning　in information industry and how to cooperation with your co-workers for lifelong learning.
IM4024	3	Information Management Lecture	The Information Management Lecture offers an overview of the majority of the academic's leading projects in the area of information management, and tackled a combination of business and technology challenges. A key purpose of the seminar was to validate with attendees that, based on the information presented. The event consisted of a series of presentations to examine the use of new practices or processes and/or technology, focus on changes to how information is created, managed or used and, emphasize the benefits that are resulting from this year's efforts.