Curriculum of Dept. Information Management in NKMU

Updated on Oct. 28, 2005

	Course	Credit	Hours	1st Year				2nd Year				3rd Year				4th Year				Memo
				Semester 1		Semester 2		Semester 1		Semester 2		Semester 1		Semester 2		Semester 1		Semester 2		
				Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	
Required Courses	Chinese Language and Literature	6	6	3		3														
	English	6	6	2		2		2												
	Physical Education	0	8	2		2		2		2										
	Military Training	0	4	2		2														
	Humanities/Social/Science Electives	16	16	2		2		2		4		2		2		2				
	Calculus	6	6	3		3														
	Sum of Required Courses	34	46	14		14		6		6		2		2		2				
Core Required Courses	**Business & Application**																			
	Statistics	6	6					3		3										
	Management Mathematics	3	3									3								
	Operation Research	3	3											3						
	Economics	3	3	3																
	Accounting	3	3			3														
	Contemporary Business	3	3	3																
	Logistics Management	3	3					3												
	Computer Science Tech. & App.																			
	Introduction to Computer Science	3	3	3																
	Program Design	3	3			3														
	Data Structure	3	3					3												
	Database Management	3	3							3										
	System Analysis	3	3							3										
	Enterprise Data Communication	3	3									3								
	Management Information Systems	3	3					3												
	Project Design (I)	3	3											3						
	Project Design (II)	3	3													3				
	Sum of Core Required Courses	51	51																	

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				Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	Lect.	Lab.	
Core Elective Courses	**Business & Application**																			
	Marketing Management	3	3							3										
	Supply Chain Management	3	3							3										
	Management Accounting	3	3									3								
	Financial Management	3	3											3						
	Production and Operation Manage.	3	3													3				
	Human Resource Management	3	3															3		
	Business Law	3	3															3		
	Electronic Commerce	3	3									3								
	Logistics Info. Manage. Systems	3	3									3								
	Marine Geographic Info. Systems	3	3											3						
	Maritime & Air-Transp. Info. Sys.	3	3													3				
	Port Management Info. Systems	3	3															3		
	Computer Science Tech. & App.																			
	Windows Programming	3	3	3																
	Multimedia Sys. & Applications	3	3			3														
	Computer Organization	3	3					3												
	Algorithm Design and Analysis	3	3							3										
	Object-Oriented Programming (I)	3	3					3												
	Object-Oriented Programming (II)	3	3							3										
	Web Programming	3	3							3										
	Handicap-Aided Comp. Sys. Des.	3	3							3										
	Java Programming (I)	3	3									3								
	Java Programming (II)	3	3											3						
	Advanced Java Programming (I)	3	3													3				
	Advanced Java Programming (II)	3	3															3		
	DBMS Operation & Manage.	3	3									3								
	Client-Server Programming	3	3									3								
	Operating System Op. & Manage.	3	3							3										
	Operating System	3	3											3						
	Linux Operating System	3	3									3								
	Network Management	3	3											3						
	Web Management	3	3													3				
	Multimedia Web Programming	3	3													3				
	Data Mining	3	3															3		

Bachelor of Management in Information Management

Courses	Credit
Required Courses	**34**
Core Required Courses	**51**
Core Elective Courses* **	**34**
Free Electives	**9**
Total Graduated Credits	**128**

* Core electives include:

At least 3 courses must be in the field of **Business & Application,** and at least 3 courses must be in the field of **Computer Science Tech. & App.**

** The following courses:

(1) Object-Oriented Programming (I) and (II)

(2) Java Programming (I) and (II)

(3) Advanced Java Programming (I) and (II)

You have to pass both courses (I) and (II), then you can get 6 credits as your graduate credits.

Course Descriptions

Statistics (3, 0)

Major topics include: frequency distribution, probability distribution, sampling distribution, estimation and testing, analysis of variance, regression analysis, nonparametric statistical method, and time series analysis.

Management Mathematics (3, 0)

This class is designed to introduce students to important topics in Linear Algebra such as linear dependence, basic, inner product, and linear transformation. The students will learn only the theorems and proofs related to this first course of abstract mathematics, but also the algorithms used in the numerical computation side of this course. Linear Algebra is also a subject of a wide variety of real-life applications. The students will be trained to apply mathematics to many of these applications.

Operation Research (3, 0)

Major topics include: Linear Programming, non-linear programming, goal programming, integer programming, and network optimization. Through the learning of model formulation, training of model formulation, training of solution techniques, as well as working on case studies, students are expected to develop these mathematical programming techniques as major tools in managerial decision-making process.

Economics (3, 0)

Accounting (3, 0)

Contemporary Business (3, 0)

Logistics Management (3, 0)

Introduction to Computer Science (3, 0)

The objective of this course is to familiarize students with the basic concepts of information technology, to expose them to our lab facilities (including desktop computers and workstations), and to accustom them to some commonly used software packages (e.g., word processing, spread sheets) and internet applications (e.g., email, bbs, and WWW).

Program Design (3, 0)

Introduces the use of a high-level programming language (C Language) as a problem-solving tool, including basic data structures and algorithms, programming techniques, and software

documents. Designed for students who have had little or no prior experience with computer programming.

Data Structure (3, 0)

Implementation and application of the essential data structures used in information systems. Analysis of basic sorting and searching algorithms and their relationship to these data structures.

Database Management (3, 0)

Overview of database architectures, including the Relational, Hierarchical, Network, and Object Models. Database Interfaces, including the SQL query language. Database design using the Entity-Relationship Model. Issues such as security, integrity and query optimization.

System Analysis (3, 0)

Information systems development life cycles, available techniques, and the methods and tools used in information systems development are introduced.

Enterprise Data Communication (3, 0)

Introduction to data communication concepts and facilities with an emphasis on protocols and interface specifications. Focuses on the lower four layers of the ISO-OSI reference model.

Management Information Systems (3, 0)

Introduction to information technology and its impact on business organizations. Key issues in MIS management are discussed and analyzed.

Project Design (I) & (II) (6, 0)

Independent study of projects and problems.

Marketing Management (3, 0)

Supply Chain Management (3, 0)

Management Accounting (3, 0)

Financial Management (3, 0)

Production and Operation Management (3, 0)

Human Resource Management (3, 0)

Business Law (3, 0)

Electronic Commerce (3, 0)

Logistics Information Management Systems (3, 0)

Marine Geographic Information Systems (3, 0)

Maritime & Air-Transportation Information Systems (3, 0)

Port Management Information Systems (3, 0)

Windows Programming (3, 0)

Introduces the use of a high-level programming language (Visual Basic) as a problem-solving tool. Designed for students who have had little or no prior experience with computer programming.

Multimedia Systems and Applications (3, 0)

The course is an introduction to the technical issues, principles, current results, and likely directions drawing upon the research literature and activity in the area of multimedia computing. Much attention will be focused on WWW, including the novel language Java that has been designed particularly for the secure and platform-independent applications over the internet.

Computer Organization (3, 0)

Introduction to the internal architecture of computer systems, including micro-, mini- and mainframe computer architectures.

Algorithm Design and Analysis (3, 0)

Introduction to the design, behavior and analysis of computer algorithms. Searching, sorting and combinatorial algorithms are emphasized. Worst case and average bounds on time and space usage.

Object-Oriented Programming (I) and (II) (6, 0)

Introduction to methodologies for object-oriented design and programming. Introduces the use

of a high-level programming language (C++) as a problem-solving tool, including basic data structures, object-oriented programming techniques, dynamic data structures, recursion, searching and sorting, and advanced object-oriented programming techniques.

Web Programming (3, 0)

Introduces the use of a high-level programming language (ASP) as a programming-solving tool.

Handicap-Aided Computer Systems Design (3, 0)

Java Programming (I) & (II) (6, 0)

Introduces the use of a high-level object-oriented programming language (Java) as a problem-solving tool-including basic data structures and algorithms, object-oriented programming techniques, and software documentation. Focuses on methods for developing and implementing object-oriented systems.

Advanced Java Programming (I) & (II) (6, 0)

Introduces more advanced elements of object-oriented programming – including data structure, recursion, searching and sorting, and advanced object-oriented programming techniques.

Database Management System Operation and Management (3, 0)

Client-Server Programming (3, 0)

Introduces the use of a high-level programming language (PHP) as a programming-solving tool.

Operating System Operation and Management (3, 0)

Operating System (3, 0)

Introduction to operating system concepts, including system organization for uniprocessors and multiprocessors, scheduling algorithms, process management, deadlocks, paging and segmentation, files and protection, and process coordination and communication.

Linux Operating System (3, 0)

Network Management (3, 0)

Web Management (3, 0)

Multimedia Web Programming (3, 0)

Data Mining (3, 0)

The course will provide an introductory look as concepts and techniques in the field of data mining. After covering the introduction and terminologies to Data Mining, the techniques used to explore the large quantities of data for discovery of meaningful rules and knowledge such as market basket analysis, nearest neighbor, decision trees, and clustering are covered. The students learn the material by implementing different techniques.