

Course Syllabus

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| 1. Program of Study | Bachelor of Business Administration Program |
| Faculty/Institute/College | Mahidol University International College |
| 2. Course Code | ICIS 384 |
| Course Title | Introduction to Computer Networks |
| 3. Number of Credits | 4 (Lecture/Lab) (4-0-8) |
| 4. Prerequisite(s) | ICIS 381 |
| 5. Type of Course | Required Course |
| 6. Trimester / Academic Year | First, Second Trimester/2007-2008 |
| 7. Course Conditions | 20-40 students |
| 8. Course Description | Architecture and components of computer communications networks; protocol concepts and standards; OSI Reference Model; network/protocol architecture examples: Internet, Intranets, Extranets, and local area networks with main emphasis on local area networks. |
| 9. Course Objective(s) | After successful completion of this course, students will be able to |
| 9.1 | Present an overview of data communications and telecommunication in business. |
| 9.2 | Define and describe data components, computer networks, protocols, and standards of communication systems. |
| 9.3 | Understand the knowledge of Open System for Interconnection (OSI) layers and apply these OSI model to the Internet Model. |
| 9.4 | Understand the specifications for the transmission media in both physical and logical perspectives. |

10. Course Outline

Week	Course Outline			Instructor	
	Topics	Lecture	Lab		Self-Study
1	Introduction to Course and communication methods Introduction to Computer Networks	4	0	8	SAP
2	Open System for Interconnection (OSI) and LAN models Physical Layer (Layer 1)	4	0	8	SAP
3	Compression VS Multiplexing techniques Modulation, Synchronous VS Asynchronous Transmission	4	0	8	SAP
4	Data Link Layer (Layer 2); Star, Ring, Tree Topologies Bridges, Switches, and Hi-speed LAN devices	4	0	8	SAP
5	Network Layer (Layer 3); Introduction to Binary and Dotted Decimal for IP addressing	4	0	8	SAP
6	Internet Protocol; IP addresses, classes Transport Layer; Domain Name Services, TCP ports, services, datagram, VC	4	0	8	SAP
7	Address Resolution Protocol (ARP), Routing Algorithms Metropolitan Area Networks (MANs) VS Wide Area Networks (WANs)	4	0	8	SAP
8	Leased line, Packet Switching Concept; X.25, Frame Relay, Asynchronous Transfer Mode, (ATM), Optical Carriers (OC)	4	0	8	SAP
9	Wireless LANs in business Wireless LANs Architecture	4	0	8	SAP

10	Intranet Satellite and Mobile Communications	4	0	8	SAP
11	Project Presentation and Review	4	0	8	SAP
	Total	44	0	88	

11. Teaching Method(s)

Class discussion
Field trip
Guest speakers

12. Teaching Media

White Board
Notebook Computer
Power Point Slides
LCD projector

13. Measurement and Evaluation of Student Achievement

Students achievement is measured and evaluated by

- 13.1 The ability to present an overview of data communications and telecommunication in business.
- 13.2 The ability to define and describe data components, computer networks, protocols, and standards of communication systems.
- 13.3 The ability to understand the knowledge of Open System for Interconnection (OSI) layers and apply these OSI model to the Internet Model.
- 13.4 The ability to understand the specifications for the transmission media in both physical and logical perspectives

Student's achievement will be graded according to the faculty and university standard using the symbols: A, B+, B, C+, C, D+, D, and F.

Student must have attended at least 80% of the total class hours of this course.

Ratio of mark

- | | |
|----------------------------------|-----|
| 1. Midterm exam | 30% |
| 2. Final exam | 30% |
| 3. Group research & presentation | 25% |
| 4. Quiz & Homework assignments | 10% |
| 5. Participation | 5% |

14. Course Evaluation

- 14.1 Students' achievement as indicated in number 13 above.
- 14.2 Students' satisfaction towards teaching and learning of the course using questionnaires.

15. Reference(s)

Forouzan. **Business Data Communications**, McGrawHill.

White, C. **Data Communications & Computer Networks**, Course Technology.

16. Instructor(s)

Sattar Puangpathanachai

17. Course Coordinator

Program Director of Information Systems Major