

EECB 423 Data Communication and Network Course Outline



Credit hours: 3
Prerequisite: CCSB164, EEEB383

Lecturer: Jehana Ermy binti Jamaluddin
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Contact Time(s): 3 times lecture hours per week

Venue: Section 2 (BW-1-R16) Section 3 (BN-4-013)

Section 2

Day	Time
Monday	3 – 4 p.m.
Wednesday	3 – 4 p.m.
Thursday	2 – 3 p.m.

Section 3

Day	Time
Monday	9 – 10 a.m.
Tuesday	9 – 10 a.m.
Wednesday	9 – 10 a.m.

Learning Outcomes (for full list, please refer to the website)

1. To understand the basic principles of data communications and networks
2. To gain and to develop skills to find information related to ICT
3. To apply the principles and concepts in the real world
4. To configure suitable techniques and preparation to establish a small computer network

Textbook:

Data and Computer Communications, 8th ed.
William Stallings
Pearson Education International 2007.

References:

Network Fundamentals CCNA Exploration Companion Guide
Mark A. Dye, Rick McDonald and Antoon W. Ruffi
Cisco Press, 2008.

Communication Networks: Fundamental Concepts and Key Architectures, 2nd ed.
Alberto Leon-Garcia and Indra Widjaja
McGraw-Hill, 2004.

Computer Networking: A Top-Down Approach Featuring The Internet, 3rd ed.
James F. Kurose and Keith W. Ross
Prentice-Hall, 2001.

Understanding Data Communications and Networks
William A. Shay
PWS, 1998

Assessments:

1. Tests (2)	20%
2. Assignments (2)	20%
3. Quizzes (Module-based)	10%
4. Final Examination	50%
Total	100%

Participation

Participation from students is expected in the form of discussion and question and answer sessions. Contribution of ideas and comments on relevant matters covered during lecture helps in achieving good grades.

Assignments

There will be two assignments given during the semester. They will be closely related to the lectures that have been covered using network simulation tools such as Ethereal and Packet Tracer. Students are to hand in the assignments subjected to certain deadlines.

Assessments

Tests would be expected in the middle and towards the end of the semester. The tests comprising Multiple Choice Questions will be done online in a specific time frame. The final examination will be cumulative and covers almost every topic in the course.

The assessments for EECB 423 would be as follows:

1. Test 1 and Test 2 – Summative Exams [10% each]
2. Final Examination –
Part 1: Multiple Choice Questions [30%]
Part 2: Structured Questions [50%]
Part 3: Question [20%]
3. Assignment 1 and 2 – [10% each]
4. Quizzes – Selected Online Module exams and Quizz [10%]

As of the Cisco requirement for CCNA 1, the assessments would consider the following:

1. Online Final Examination [60%]
2. Skill-based Exam [20%] – taken from EECB351
3. Selected Module Exams [20%]

Students who have been studying consistently throughout the semester will be able to perform well in the exam. Portfolios are to be prepared to determine the final grade.**

Attendance

Attendance is compulsory (refer to Student's Handbook). Students with poor attendance results in dismissal from taking the final examination. Attendance will be taken during every lecture session. *Quizzes are to be given to determine a student's overall carry mark weightage for the final grade.*

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Plagiarism

Students should not adopt or reproduce statements without appropriate acknowledgement. Copying someone else's work or facilitating academic dishonesty constitutes plagiarism.

Policies

All assignments are to be handed in at the beginning of lecture on the assigned due date. Late assignments will be accepted at the discretion of the lecturer with a 10% per day penalty. No assignments will be accepted once the solution to the assignments has been posted.

Indicative Lecture Programme

The following is an indicative program of lectures for this semester, although the order may change. Summary handouts will support the lecture program, however it is in your best interest to attend regularly to ensure that you supplement the summaries with your own notes. Please refer to the webpage at <http://metalab.uniten.edu.my/~jehana> or your section's representative in case of any unexpected changes.

Program schedule

Week	Start date	Agenda	Comments
1	6-Jul	Review and Introduction lectures to EECB423 Orientation on Academy Connections Lecture 1 - Living in a Network-Centric World	
2	13-Jul	Lecture 2 - Communicating over the Network	Registration to The Academy Module 2 Exam
3	20-Jul	Lecture 3 - Application Layer Functionality and Protocols	Assignment 1 - Ethereal Module 3 Exam
4	27-Jul	Lecture 4 - OSI Transport Layer Test 1 (29-Jul)	Module 4 Exam
5	3-Aug	Lecture 5 - OSI Network Layer	Module 5 Exam
6	10-Aug	Semester Break	
7	17-Aug	Lecture 6 - Addressing the Network - IPv4	Assignment 2 Packet Tracer

8	24-Aug		Module 6 Exam
9	31-Aug	Lecture 7 - Data Link Layer	Module 7 Exam
10	7-Sep	Lecture 8 - OSI Physical Layer	Module 8 Exam
11	14-Sep	Lecture 9 - Ethernet Test 2 (16-Sep)	
12	21-Sep		Module 9 Exam
13	28-Sep	Lecture 10 - Planning and Cabling Networks	Module 10 Exam
14	5-Oct	Lecture 11 - Configuring and Testing Your Network*	Module 11 Exam
15	12-Oct		Practice Final CCNA Exploration 1
16	19-Oct	Reading Week	CCNA1 Final Exam Skill-Based Exam
17	26-Oct	Final Exam Week	Portfolio Submission
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Note: Students are to keep record of all assignments, reports and notes in a specific folder for portfolio purposes. Starting from last two years, the EECB423 curriculum is integrated with the Cisco Academy CCNA 1 Networking Basics curriculum. This semester the course is adopting the new Exploration curriculum. This initiative aims to prepare the graduates for Cisco Professional Exams to obtain certifications like CCNA and CCNP.