La Trobe University, Bendigo
Division of Information Technology

BITCNE: Computer Networks

Subject Outline, Semester 1, 1999 (Version 2.2)

Content:

Topics expected to be covered in 1999 include:

- Overview of computer networks: layered models, functional description of the layers. The role of de jure and de facto standards.
- The transport service.
- Basic Internet application protocols: telnet, HTTP, SMTP, etc.
- Technical aspects of the Internet: IP, routers, DNS.
- Overview of network technology.
- Commercial telecommunications services and charging models.
- Network management, including SNMP and introduction to ASN.1. Network management software tools.
- Introduction to network security issues and firewalls.
- Introduction to encryption technologies and their application.
- Applications of computer networks in Electronic Commerce.

URL

The Internet URL for this subject is:
`http://ironbark.bendigo.latrobe.edu.au/subjects/bitcne/toc.html`

Texts:

Nil. There is no single *textbook* for this unit. Instead, a variety of sources, both printed and on-line, will be used.

References:

The following are basically in order of relevance to the subject. Note that this list is not yet finalised for 1999, with a few changes likely before the start of semester.

Comer, D.E, (1999) *Computer Networks and Internets 2/e* NJ, Prentice-Hall. ISBN 0-13-084222-2

Stallings, W (1994) *Data and Computer Communications, 5th Ed* NY, Macmillan. ISBN 0-02-415441-5 (hardcover).

Comer, D.E, (1995) *Internetworking with TCP/IP, Volume 1: Principles, Protocols and Achitecture, 3rd Ed* NJ, Prentice-Hall. ISBN 0-13-216987-8 (v.1)

Tanenbaum, A.S. (1996) *Computer Networks, 3rd Ed* NJ, Prentice-Hall. ISBN 0-13-394248-1

Halsall, F. (1996) *Data Communications, Computer Networks and Open Systems, 4th Ed* Wokingham, Addison-Wesley, ISBN 0-201-42293-X

Piscitello, D.M. & Chapin, A.L. (1993) *Open Systems Networking: TCP/IP and OSI* Reading, Mass: Addison-Wesley. ISBN 0-201-56334-7 (hardcover)

Stallings, W and Van Slyke, R, (1998) *Business Data Communications, 3rd Ed* NY, Macmillan. ISBN 0-13-761230-3

Stevens, W. Richard (1994?) *TCP/IP Illustrated, Volume 1: The Protocols* Reading, Mass: Addison-Wesley. ISBN 0-201-63346-9 (hardcover)

Contact time:

2 hours lectures per week, 2 hours tutorial per week. Note that this applies to students taking the subject in conventional mode. Special arrangements exist for students taking the subject in "Internet-assisted" (Saturday class) mode.

Lecturer:

Phil Scott, phone 5444 7277, email P.Scott@latrobe.edu.au, office: B1.11

Assessment:

There will be a single 3 hour exam at the end of the semester, which will count for 60% of the marks in this unit[1]. Three (5%, 15% and 20%, due at the end of weeks 3, 7 and 13[2]) assignments will account for the remaining marks.

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[1] A subminimum of 40% of the possible exam mark (ie 24 out of 60) will apply to pass the subject

[2] Provisional due dates, subject to change. Exact details will be communicated shortly.