Webster UNIVERSITY

School of Business and Technology

Course Syllabus

Course	ITM 5100 – Information and Communications Systems and Networks
Term	Summer, 2009
Instructor	Name: Del Brashares Phone: 632-3439 (H); 229-5683 (W): Email: brashare@intertek.net; del.brashares.ctr@scott.af.mil
Catalog Description	This course introduces students to the technical aspects of information and communications networks and technology. The course focuses on the interdependencies among information and communications technologies and architectures. Emphasis will be placed on the fundamentals of networks (LAN and WAN). (from the *Webster University 2007-2009 Graduate Studies Catalog*) In addition, this course focuses on the principles and terminology of telecommunications. Topics include the implications of recent changes of the North American Numbering Plan, deregulation, mobile satellite services, wireless concepts, virtual private networks, network management, local and enterprise networking, and new and emerging technologies. Lab time will be available from time to time. (from the instructor)
Prerequisites	Students should have taken ITM 5000 or its equivalent prior to enrolling in this course. Students should also have a curiosity about one of the most fascinating and useful fields of study for business and industry. At least as important is a desire to expand your horizons and a belief that knowledge of information technology is critical in helping an organization meet its strategic goals.
Course Level Learning Outcomes	At the conclusion of this course, students are expected to: a. Understand why the study of telecommunications and networking is important. b. Understand that the management of telecommunications and networking is an important part of business strategy. c. Understand basic telecommunications and networking terminology. d. Understand the basics of telecommunications, networking, and networking management. e. Identify key facets of telecommunications and networking for economic exploitation. f. Attain a better understanding of information technology as a management tool in facilitating the flow of information throughout an organization. g. Understand today's technology and new and emerging technology h. Understand the need to remain informed.
Materials	*Business Data Communications and Networking*, tenth edition, Jerry FitzGerald and Alan Dennis, 2009, John Wiley & Sons.
Grading	Milestone: Points: Percentage: Grade: Tests (2 @ 100 pts each) 200 93% A Term paper overview 10 90% A- Attendance, class participation, etc. 25 87% B+ Term paper 80 83% B Term paper synopsis 20 80% B- Group presentation 65 70% C 400 Before turning in assignments, please review the syllabus and any notes from the instructor to ensure you haven't forgotten anything. Feel free to have your peers

	provide comments and advice on your deliverables. Nothing wrong with teamwork as long as you do your own work.
Activities	**Group Presentation:** Students will be divided into groups to prepare and present an integrated presentation based upon the topic chosen by the group and approved by the instructor. Each presenter should leave the class with an appreciation for the *managerial implications* of the topic presented and close by recapping the two or three major points most relevant for the class, not just a list of topics discussed. *Individual* presentations are to be in the 10-14 minute range. One individual will state the focus for the group, introduce the group, and state how the presentations tie together. Then, each individual will present his/her portion of the group presentation and transition to the next group member. Finally, a group member will quickly wrap up the group's set of presentations. Each topic is to be *management oriented*. Remember, you are presenting your topic to a group of your management peers — *avoid the heavy technical details!* PowerPoint slides shall be used by each person. Please don't read your paper or notes! Each group will turn in one CD-ROM or DVD with the each member's set of PowerPoint slides, synopses, term papers, and key sources. The second slide of each presentation will be the expected ROI to be gained by those in the audience from listening to the presentation. See examples at the end of this syllabus. A hypothetical example of a group whose subject covers the wireless concept follows. ▪ One student could start by presenting an overview of the wireless concept and why it's important for management to grasp the concept. ▪ Another could present the issues and concerns that managers should be aware of reference wireless technologies. ▪ Another could examine a case study highlighting successes and failures. ▪ Another could focus on landmark products and how close they come to meeting customers' expectations. ▪ Another could focus on the viability and expected applicability of emerging products. Keep in mind that the briefings are to focus on *management* considerations. Also, your goal is to add value to the class; don't just present information at the level already covered in class (or anticipated to be covered in class) or in the text. As time permits after each set of presentations, the class will discuss how information gained in the set of presentations could be implemented effectively into an organization. The presenting group will act as the set of consultants for the discussion. All class members are expected to participate in each discussion. Team composition and due dates for the group presentations should be finalized during week two. **Synopsis:** A two-sided synopsis of your paper shall be passed out to the classmates *prior* to beginning your presentation. The synopsis shall include your name and topic. It will include an introductory paragraph followed by major points of your paper such as: ▪ impacts within an organization, ▪ management issues and considerations, ▪ comparisons with related technologies, ▪ concerns for management, ▪ potential applicability, and

	▪ pluses and minuses. After an introductory paragraph, the remaining information should be presented in bullet format. Think applicability, advantages, disadvantages, management issues, prospects, etc. In addition, from *three to five* of the most significant URLs used in your research shall be included. Your key is to fill the two sides with as much relevant information in as readable of a format as possible. Ensure it has staying power by providing value even a few months after your presentation. **Term Paper:** Students shall each write a term paper based upon their portion of the group presentation. Each paper shall concentrate on management issues and implications associated with current and leading-edge telecommunications and networking topics. Where practical, ROI, RCO, and TCO concepts should be covered for each paper. Each paper shall be double-spaced and shall be a minimum of 10 full pages of text; papers should not exceed 15 pages in length. Title page, bibliography, pictures, diagrams, and tables are *not* included as part of the 10-page minimum. Proper attribution, footnoting, and appropriate quotes are expected. Please use Arial, 10 point. While it is strongly encouraged to review a number of varied sources and evaluate the author's opinions, please interject *your* views based upon your research and experience. At a minimum, 10 sources are required, at least seven of those must date back no further than 2007. At least seven of the required sources shall be obtained via the Internet. Do not use Wikipedia as a source. Paper copies of the three most significant downloads used for your paper are required as an attachment. When listing the URLs in the bibliography and synopsis, ensure they are complete down to the file name of the Web document. The two-sided synopsis is also to be attached. Our text can be used, but it counts as an additional source above the required minimum number of sources. Please thoroughly review your paper before turning it in. Being enrolled in a graduate program, you understand that a professional paper is expected in terms of content, presentation, and grammar. A one-page overview of the paper is due in week four. The overview should be in paragraph form, double spaced, and should present the author's focus, proposed ROI statements, and how the approved topic will be covered. Term papers are due at the beginning of week eight's class.
Policy Statements: University Policies	Incompletes must be made up within the time specified by Webster University. All examinations and assignments are to be completed as scheduled unless excused because of illness, death in the family, or work commitments (e.g., TDY).
Course Policies	Please keep the instructor informed as appropriate and bring in travel orders, notes from your supervisor, doctor, etc., for absences that are excused. Webster University officials ask that the names of anyone with two or more unexcused absences be provided to Webster's Scott AFB office.
Weekly Schedule	**Week 1 – 3 June 2009** Chapter 1: "Introduction to Data Communications" and chapter 2: "Application Layer." **Course overview.** **Week 2 – 10 June 2009** Chapter 3: "Physical Layer" and chapter 4: "Data Link Layer." **Presentation dates scheduled.** **Week 3 – 17 June 2009**

	Chapter 5: "Network and Transport Layers." **Term paper topics finalized.** **Week 4 – 24 June 2009** **Test 1 (chapters 1-5)**. Chapter 6: "Local Area Networks." **Term paper overview due.** **Week 5 – 1 July 2009** Chapter 7: "Wireless Local Area Networks." **Group presentations begin.** **Week 6 – 8 July 2009** Chapter 8: "Backbone Networks." Group presentation. **Week 7 – 15 July 2009** Chapter 9: "Metropolitan and Wide Area Networks" and Chapter 12: "Network Design." Group presentation. **Week 8 – 22 July 2009** Chapter 13: "Network Management." **Term papers due.** Group presentation. **Week 9 – 29 July 2009** Makeup presentations. **Test 2 (chapters 6-9, 12-13).**
Additional Information	**Acceptable group topics (others may be approved):** Promise of Unlimited Bandwidth on Demand Strategic Planning for Networking & Telecom Mobile Satellite Services PCS, Bluetooth, & Wireless Tech Frame Relay, ATM, & WAN Tech Internet Trends Hot LAN and Wireless LAN topics VPNs & Emerging Networking Tech Lessons from 9-11 Case Studies Network Design Fundamentals TCO & ROI Network Management Impact of Telecom Act of 1996 Deployable Communications IPv6, VoIP Network Security **Example ROI Statements**: ROI: "The 99.999% Solution" Listen to this presentation to learn: • How to identify single points of failure • Tips on building a high-availability network • The ups and downs of network outsourcing *CIO*, 15 Feb 00 ROI: "The Money Pit" Listen to this presentation to learn: • Find out why good project management means more than just good IT • Read about the technology that helps track monster projects • Find out where the Big Dig went wrong *CIO*, 1 Dec 00 **Bonne Chance!**