

EDIT 5341 Computer Networking and Data Management
Dr. Dave Stamper
WBU/Online
Virtual Blackboard Course

CATALOG DESCRIPTION: Advanced skills in data management, establishing a computer network, hardware and software for the computer network and troubleshooting the network. Course content based upon the state and national Essential Knowledge and Skills. Software applications used will be Microsoft Access and Windows.

INSTRUCTOR INFORMATION:

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COURSE PREREQUISITE(S): None

Resources:

- **Textbooks:**
 - Shelly, Gary, Cashman, Thomas & others (2008) Microsoft Office Access 2007, ISBN 13: 978-1-4188-4341-1. ISBN: 1-4188-4341-5
 - Tomsho, Greg (2006) Guide to Networking Essentials, Fifth Edition, ISBN 13: 978-1-4188-3718-1 © 2007, ISBN 10: 1-4188-3718-0
- **Software:** Microsoft® Windows XP and Server 2003, and/or Vista & Microsoft Office 2003 Suite (or 2007), MS

Textbooks: Throughout the syllabus in assignments/schedule will be referred to in following manner:

<u>Microsoft Office Access 2007</u>	Access
<u>Guide to Networking Essentials</u>	Networking

ADDITIONAL EQUIPMENT: None.

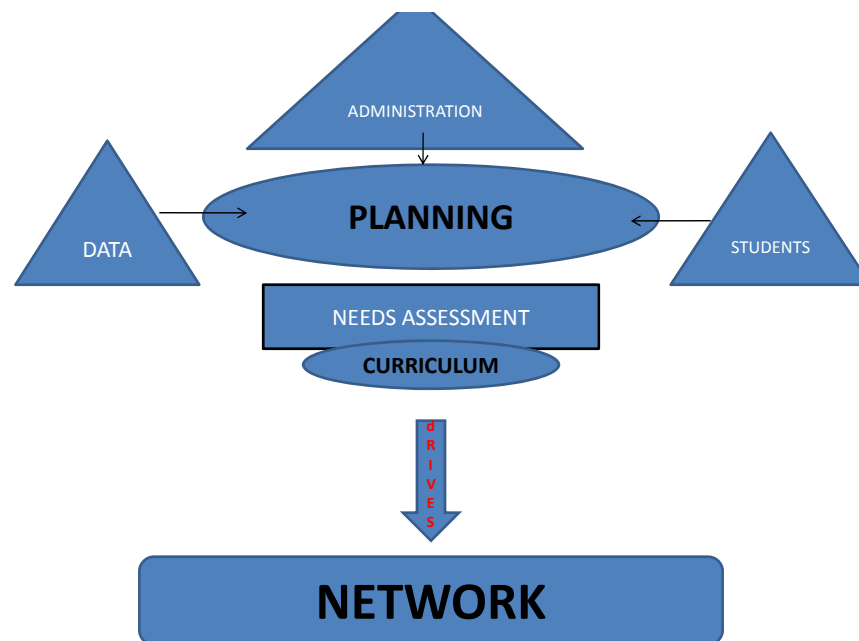
COURSE OUTLINE: The major units of the course are:

- A. Overview of technology in the educational context, including the history and some projections for the future.
- B. Planning for effectively integrating technology in the educational setting.
- C. Learning theories and integration models.
- D. Principles and strategies for integrating instructional software into teaching/learning activities.
- E. Strategies for integrating database and networking software into teaching/learning activities.
- F. Integrating database and networking software in the educational setting
- G. Networking concepts for the educator
- H. Integrating the Internet and other distance resources (web-based activities).
- I. The future of technology.

OUTCOME COMPETENCIES:

1. Describe the evolution of incorporating technology in education.
2. Plan and implement the integration of technology into education.
3. Explain principal learning theories and integration models.
4. Use instructional software in teaching and learning.
5. Use productivity software in teaching and learning.
6. Create a database as a teaching model(s) and learning theories either learned in the class or developed during the class.
7. Create a network with educational potential and in line with the learning theories either learned in the class or developed during the class.
8. Use database and networking to support teaching and learning.
9. Define networking concepts from an educator's perspective
10. Design and implement an educational network
11. Describe a variety distance learning options and opportunities.
12. Use the Internet in teaching and learning.
13. Project the future of educational technology based on analysis of the educational environment and the current and projected state of educational technology.

BELOW IS COGNITIVE MAP WHICH DESCRIBES THE INTENT OF THE COURSE, DISPLAYING ALL THE FORCES THAT IMPACT NETWORKING IN EDUCATION, FROM PLANNING TO ACQUIRING THE EQUIPMENT, INTEGRATING INTO CURRICULUM, AND THEN IMPLEMENTATION.



EDIT 5341 NETWORKING COURSE MAP

COURSE REQUIREMENTS AND EVALUATION: There are no regularly scheduled meetings for this class. On course content will be delivered through Blackboard at <http://virtualcampus.wbu.edu/webapps/login/>. Expectations are that all deadlines for

assignments will be met. Benefits derived from assignments and projects depend on the level of commitment, time, and effort expended. Consequently, grades will depend on timely submission and assignment or project quality. To receive credit, all assignments/projects must be turned on time.

No projects will be accepted later than 4 p.m. on the last Friday of the term. As a requirement of this course, all students must review materials posted on Blackboard on a regular basis in order to familiarize themselves with the details of course requirements and associated procedures. Students are expected to complete all assigned readings, discussions and projects.

Grades for the course will be determined as follows:

COURSE EVALUATION:

Category	Point Value	Percentage
1. Test 1: 75 pts & Test 2: 125 pts-- Online Assessment	200	20%
2. Email with Networking Resume/Experience	25	2.5%
4 A. Networking Needs Assessment Worksheet (Word) Draft:	40	4%
4 A. Completed Needs Assessment	75	7.5%
3. Access Dbase Assignments	250	25%
4. A. Networking Needs Assessment Presentation	50	5%
4. B. Completed Networking Plan with Design Interface	250	25%
4. C. Network Design with Schematics (Picture of Network)	100	10%
5. Announcement Acknowledgements (2@5 points)	10	1%
Totals	1,000	100%

Examinations: There are two written examinations in this course. There will be one mid-term exam that covers the textbook content, as well as lecture materials, and a final comprehensive exam. Exams will be conducted online through Blackboard. Exams will be made available for a 4-day period and must be taken within that timeframe. If you are not able to adhere to this timeframe, you must contact the instructor prior to the exam date to determine if an alternate time can be arranged.

Reading/Exams You will be assigned reading from the textbooks as listed in the syllabus. Reading assignments are to be completed on schedule as it important to to keep pace and that you understand that the text. It may relate directly to an assignment such as in ACCESS (e.g., **Access** AC1-AC71) or it may explain the background information you will need when describing and planning your Network. Read prior to the date during the week of the schedule, and certainly before you start your assignment). Keep in mind that the Blackboard Online, "**Lesson Notes**" (Power Point slides developed by me) should be completed prior to starting an assignment as they contain essential highlights of the text and other information that is **crucial** to understanding an assignment, and these Lesson Notes also serve to clarify some of the technical aspects. Besides that, these should clarify key points that are tested in the examinations. Keep in mind that reading are in accord with both assignments and also crucial knowledge about networking for your networking projects.

Assignments:

1. **Resume/Experience** (25 points) During first week of class, it's important that the instructor (myself) has a "handle" on your educational, computer and networking experience. You will send me a Word document with this information.

Email with Networking Resume/Experience	25	2.5%
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2. **ACCESS DATABASE** There are four (4) computer assignments (see below) inside one dbase which you will send to me independently attached to an email as you complete them. The dbase will contain all the **computer assets** you need for your network. I will put a sample Network equipment in Lesson Notes, but you must realistically design and selects the networking assets based on your needs assessment and your network design.

Access Dbase Assignments	250	25%
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Dbase Computer Assignment Point System:

3-Dbase Basic include only Tables (Assign 3)	75 pts
6-Dbase- from Table, Add Query (Assign 6)	50 pts
7-Dbase- Table, Query & Report from Query (Assign 7)	50 pts
8-Export Query to Excel, Sort in Alphabetical order (Assign 8)	75 pts
Total Possible pts	250 pts

3. You will complete three (3) written assignments:

A. **Network Needs Assessment Worksheet/Power Point presentation (165 points):**

This will be the initial step in setting up an educational network, including a Power Point presentation (**50 points**) to your responsible authority for making management decisions for implementing a network and/or computer assets (I realize that setting up a network involves more than having a computer lab, but at least it is a start). Some organizations may already have this process formalized. For example, for my day job as the educational consultant for DoD military physician education, if we would like to add, modify or delete computer assets, we complete a information management form, which in turn goes through a committee for approval, then we can make the change. So, if this is the case please turn in this form with this assignment. Also, as part of this assignment, you run a report of your computer assets taken from your dbase.

- 1) **First send me a one-two page bullet paper:** this will be an outline of your needs assessment, that gives me time to respond before you complete the more detailed needs assessment analysis (**Assignment 2:** 40 points)

Networking Needs Assessment Worksheet (Word) Draft: (25 points)	40	4%
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- 2) **Complete the 3-5 page** needs assessment **based on my feedback.** (**Assignment 4:** 75 points)

Completed Needs Assessment (75 points)	75	7.5%
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- 3) **Power Point: 3 to 5 slides including a summary:** this would be part of your argument to the decision maker for approval of networking proposal (**Assignment 5:** 50 points)

Networking Needs Assessment Presentation	50	5%
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- B. **Completed Networking Plan (250 points):** Included will be your approval from your original needs assessment, a plan for acquiring all networking equipment (either using existing computers-adding network cards and a server, or all new computer systems with a server), networking software, and any additional software such as MS Office 2007.

Completed Networking Plan with Design Interface	250	25%
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- C. **Network Schematic (100 points)** Last but not least, you will send me in Power Point format, a schematic two slide or more format of your actual network. First take a "picture of your actual network" which shows all the systems, folders, etc. You can do this by using "Screen Print" function of Windows. Get your network view through "My Computer" or My Network, open up the Power Point first, and select a slide with blank format. Simultaneously, click Shift with Print Screen keys on the keyboard, now in Power Point, click Paste. Then on following slides, explain all details including the primary purpose of the educational network as taken from the original plan.

Network Design with Schematics (Picture of Network)	100	10%
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Grade sheets: Within each assignment, there will be a grade sheet. Use it as a guide, as it contains how the assignment will be assessed.

Assignments are due by **midnight**, Central time on the dates noted on the course calendar. Late assignments will not be accepted without prior approval. Prior approval means before the assignment due date. **Late assignments will be penalized a minimum of 10% per day they are late.**

A copy of this syllabus is provided online through Blackboard and is accessible throughout the class.

5. Class Discussion/Participation (10 points): You are required to use the Blackboard, and acknowledge announcements which are posted weekly. All postings should contribute to the overall content of the course. Acknowledgement will be in form of email with a key phrase on posting. A portion of your course grade is based on your reading and **acknowledging announcement**. There will be a minimum of two announcements (which require an acknowledgement) throughout the semester.

5. Announcement Acknowledgements (2@5 points)	10	1%
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Final Networking Project (4B. Network Plan (28 Oct) + 4C Schematic (21 Oct): 350 points total) This is a **rather extensive project** that consists defining, designing and implementing of an educational network. Instructions on submitting will be provided with the content of the course. The final project must be submitted on time. **Late projects will be penalized 10% per day they are late. No work can be submitted after the last day of class.** Please note that this project cannot be effectively accomplished at the last minute.

Overview: The networking project will consist of the design and creation of various dbases and a hypothetical local area network (can be any type to include 2Wire and printer network Lan, shared drive technology). The aim of this **course** is for you to define the primary steps in setting up a network for use in an educational environment. It could be your computer lab at school or a university, or even within a learning environment within an office environment. For example, a college English class using collaborate writing through a network. There is no limit on how to apply the technology.

Guidelines: All dbase or networking projects will be required to function on a standard PC/MS Server Windows environment. Projects in other operating systems will not be accepted.

- 1) Since this course is also about data management, you will be required to make a database of all computer, software, equipment, furniture, media, whatever will be required for your educational network for both use within a classroom environment and to support the goals of networking in general. This database management function will also be part of the planning process.
- 2) Planning is everything. Most projects/products can be attached via email and sent to me directly. Arrangements can be made on how to submit content to me. This will be based on the technology you have available to you. All material must be turned in by the due date.
- 3) You will do a “**needs assessment**” of the type of network you envision and the projected costs of those components. The plan will be for you to do analysis (and as part of this analysis, will send a draft to me, will then ask for any modifications; you will finalize), then a presentation of your analysis for using networking to your school official and/or CEO, demonstrating the potential for using networking components which will include all hardware (network cards) and software purchases in your estimate. Next, contingent upon the networking project being approved (believe me it will be!), develop an implementation plan, then field test it, and then run the network in a learning environment. Documentation must be typed and proofread. Professionalism includes watching out for the details.

Numeric Course Grade (out of 100 %)

Exams - 20%

Written Documents (Word) - 40%

Database Projects - 25%

Networking Schematics - 10%

Other Related Assignments - 5%

Letter Grade Determination: The following table will be used in converting your numeric grade into an official letter grade for the course:

Wayland Grade	EDIT Points Minimum
90 - 100 % = A	900-1,000
80 - 89 % = B	800-899
70 - 79 % = C	700-799
60 - 69 % = D	570
0 - 59 % = F	569

Wayland's policy allows the instructor to issue a grade of "Incomplete" only if the student is unable to complete an assignment for reasons beyond his or her control.

COMMUNICATIONS: All communications (Announcements) for our class will take place within Blackboard. Please email all questions and communicate with me directly at dave_stamper@sbcglobal.net or through the Mail tool in our Blackboard class.

ATTENDANCE POLICY: Students enrolled at one of the University's external campuses should make every effort to attend all class meetings. All absences must be explained to the instructor, who will then determine whether the omitted work may be made up. When a student reaches that number of absences considered by the instructor to be excessive, the instructor will so advise the student and file an unsatisfactory progress report with the campus dean. Any student who misses 25 percent or more of the regularly scheduled class meetings will receive a grade of F in the course. This is an online course and the expectation is that you will log in at least 3-4 times a week to your class. This is tracked by the Blackboard system.

INSTRUCTOR RESPONSIBILITIES: I will respond to any questions you may have in the following manner:

If I receive an e-mail from you Monday through Friday, before 4:00 p.m., I will try to respond to you that day. If I receive an e-mail after 4:00 p.m., I will respond to you the next day. There are times when I will be online after normal business hours, so please go ahead and send your questions and I will answer them if I am online. I will check my e-mail throughout the weekend unless I am out-of-town. I will let you know ahead of time if I am going to be gone. I will not guarantee a response to e-mail during scheduled school holidays. I will do all reviewing and grading activities during the weekends.

TECHNICAL PROBLEMS/SUPPORT: If you are having computer problems, you have to let me know. I will try to help you in any way that I can. Please remember that it is your responsibility to have a backup plan if your computer goes down. Please have this plan in place now and do not wait until it is a crisis situation. If you lose your assignments due to bad floppy disks, computer crash, or your dog ate your homework, there is nothing I can do about it. **THIS IS YOUR WARNING TO HAVE A BACKUP PLAN IN PLACE.**

SERVICE FOR THE DISABLED: It is university policy that no otherwise qualified disabled person be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the University. Students should inform the instructor of existing disabilities at the first class meeting.

ACADEMIC HONESTY: University students are expected to conduct themselves according to the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is the presentation of the work of another as one's own work.) Disciplinary action for academic misconduct is the responsibility of the instructor. The instructor is responsible for assessing the seriousness of any case of academic dishonesty and with determining the penalty. Penalties that may be applied to individual cases of academic dishonesty include one or more of the following:

1. Written reprimand.
2. Requirement to redo work in question.
3. Requirement to submit additional work.
4. Lowering of grade on work in question.
5. Assigning the grade of F to work in question.
6. Assigning the grade of F for course.
7. Recommendation for more severe punishment (see Student Handbook for further information).

Any student who has been penalized for academic dishonesty has the right to appeal the judgment or the penalty assessed. (See Student Handbook or the campus dean for further information.)

COURSE CALENDAR FOR EDIT 5341

Fall 2008

August 18-October 31, 2008

Begin Date	Assignment and Instructions
READ: Week of August 23rd	ACCESS: Section: AC: pages: AC1-AC63, Database design: creating tables NETWORKING: Chapter One: 1-24
WEEK ONE CONTINUED August 23rd	Class begins. Familiarize yourself with course. Check out all Blackboard Announcements, Lesson Notes and Assignments. Begin Dbase: ACCESS-Introduction ACCESS-Creating and Maintaining a Database ACCESS-Creating a Table NETWORKING: INTRODUCTION
ASSIGNMENT 1 <u>Due 30 August 2008</u>	Assignment # 1 Resume of Experience/Networking Introduce yourself via email with a technology resume to include: <ol style="list-style-type: none"> 1) Education/teaching experience (10 points) 2) Computer experience to include dBase (10 points) 3) Networking experience (5 points) <u>SEND EMAIL BY SATURDAY, August 30th</u>
READ: Week of August 30th	ACCESS: Section AC: 73-121. Queries NETWORKING: Chapters 2-3: 25-122
Week of August 30th	NETWORKING: DESIGN THROUGH MEDIA ACCESS: Queries
Assignment #2 <u>Due September 6th</u>	Based on your reading of Networking book, construct a two page bullet paper, "Needs Assessment", send to me attached to an email. Complete the 1-2 page bullet paper describing your concept for the Needs Assessment. And send the email to me. by <u>SEND Needs Assessment draft NLT September 6th: EMAIL BY SATURDAY, September 6th.</u>
READ: Week of September 6th	ACCESS: 137-148
WEEK OF 6 SEPTEMBER	Complete the Needs Assessment draft, and begin to think about what computer equipment is in your network, as you will submit this for Access Database (to be submitted NLT September 13 th), Don't forget to attach the Needs Assessment Draft & send.
Read Week of September 13th	ACCESS: 205-226 NETWORKING: 4: Network Interface Cards
ASSIGNMENT 3 Data Base Table Due September 13, 2008	Attach your dbase with a table of all equipment required of your Local Area Network. Email to me on NLT September 13th!
READ: WEEK OF SEPT 20TH	Review for Midterm

MIDTERM EXAM	MIDTERM EXAM: September 16-20th. Mid-term Exam (covers chapters 1-6 in <u>Networking</u> textbook and lecture notes) Exam will be available from July 16-20th, 2008 on the Blackboard course management system. There will be 15 multiple-choice questions and Exam will have a 45 minute time limit.
ASSIGNMENT 4 REVISE & TURN IN Needs Assessment Due September 20, 2008	Based on instructor comments, revise and resubmit your plan for your local area network. Be specific, describe software, hardware, number of users, machines, etc.
READ: Week of Sept 27th	Networking: 5: Making Networks Work 6: Network Communications and Protocols
ASSIGNMENT 5 POWER POINT YOUR NEEDS ASSESSMENT DUE SEPTEMBER 27, 2008	SUBMIT POWER POINT presentation that explains the rationale for your needing a local area network. This would be part of your presentation to the principal, the superintendent, president or CEO. Attach and send to me via email.
READ Week of October 4th	Networking: 7: Network Architectures 8: Simple Network Operations
ASSIGNMENTs 6 & 7 dBase Query dBase Reports October 4th Due	Assignment 6 & 7, Access Database Query from Table, and Report from Query. Complete the table with your from your dBase. This time, make the query per instructions on the grade sheet, then make 2 reports one from the table and one from this query <i>NLT October 4th!</i>
READ Week of October 11th	Networking: 10: Introduction to Network Security (new) 11: Supporting a Small Business Network 12: Network Administration and Support
ASSIGNMENT 8 dBase export Excel Week of October 11, 2008	Dbase export the Query you made to Excel, Re-Attach the Access Dbase with these changes, save & attach the Excel spreadsheet. Due October 11th.
Reading: Week of October 18th	Networking: REVIEW FOR FINAL
October 14-18, 2008 Final Exam 125 Points	Final Exam - available from October 14-18, 2008. Exam will contain 25 multiple choice questions (5 points each). It is a comprehensive exam and will contain questions from all textbook readings and lecture notes for class in reference to networking and lesson planning. Exam will have a 75 minute time limit.
Assignment Final Project 25th October	Attach your final networking plan, and email to me <u>NLT</u> <i>October 25th</i>
October 30, 2008 LAST WEEK	Work on Network Schematics! Follow the grade sheet for guidance. Take the "snapshot" of your network, the final evidence - submit by midnight, Tuesday, October 30th, 2008. No exceptions!
Class ends!	

What follows is some summary of the Readings and Assignments which are included in the calendar:

Date	Readings
Aug 23rd	ACCESS: 1-63 NETWORKING: 1-24
Aug 30th	ACCESS: 73-121 NETWORKING:
September 6th	ACCESS: 137-148
September 13th	ACCESS: 205-226 NETWORKING: CHAPTER 4
September 27th	Networking: 5 & 6
October 4th	Networking: 7 & 8
October 11 th	Networking: 10,11 & 12

Due Date	Assignment
AUG 30TH	Assignment # 1 RESUME
SEPTEMBER 6TH	Assignment # 2 Needs Assessment Draft
September 13th	Assignment #3 Access Database- Table of LAN Equipment
September 20th	Assignment #4: Needs Assessment Also don't forget to take your Midterm online!
September 27th	Assignment #5 Power Point of Needs Assessment
October 4th	Assignment #6 Access Database Query Assignment #7 Access Database Report from Table & Query
October 11th	Assignment #8: Export Dbase to Excel
October 18th	FINAL EXAM
October 25th	LAN Plan
October 30th	Schematic of LAN