

EASTERN CONNECTICUT STATE UNIVERSITY  
SCHOOL OF EDUCATION AND PROFESSIONAL STUDIES  
DEPARTMENT OF BUSINESS ADMINISTRATION

**BIS 461 Seminar on Information Systems and Business Strategies**

Spring 2011, Wed 7-9.45 pm Webb 307

**Instructor:** Dr Don Petkov, office WH336, Office tel (860) 465 0264 or (860)465 4620 (secretary), email [petkovd@easternct.edu](mailto:petkovd@easternct.edu), web site: <http://nutmeg.easternct.edu/~petkovd/>

**Student consultations** during office hours in Webb 336: Monday 12.45 pm -1.45 pm; Tuesday 2.15 pm-3.45 pm and 7pm - 7.30 pm; Wednesday 4.30 pm-6.30 pm or by appointment set by email in very exceptional circumstances only. The students are expected to check the course web site at least two times a week (Tuesday and Friday) for instructions related to the course.

Students should communicate with each other only via Blackboard Vista and should arrange regular instant sessions in the Blackboard chat room that corresponds to their group number allocated by the instructor.

**Students are expected to attend every session. Students need to be prepared for the weekly tasks before the class however they are not supposed to do them before the class. Non attendance will affect heavily your participation grade. If you miss more than 4 class sessions you will not be allowed to complete the course.** In order to get a good grade for student participation all week assignments have to be completed by the end of the class session for the students or if instructed within the three days grace period after that. **In case of a snow storm the students should follow instructions by Vista email from the instructor and complete on their own all the prescribed work for the particular week in the course schedule.**

**Tests 1 and 2 and the midterm exam will be in class but we will have also other work in each of those sessions to complete.** The duration will vary but will not be more than 75 mins.

**Deadlines are declared in the schedule below and in the links for the corresponding elements in Vista, by 11 pm** on the particular day. It is very important that you stick to them. You can submit without penalty within 3 days from the deadline which usually captures all cases of short trips or a short illness. If a submission is made between 4 and 7 days after the deadline for whatever reason, the penalty will be 10% of the corresponding grade. If a submission of an assignment is made after 7 days past a deadline but no later than the evening of May 15<sup>th</sup> 2011 (last possible day to submit), then the penalty will be 30%. No submissions will be accepted after that date. **However note that the first and second version of the research paper and the team project will not be accepted after 10 days have passed since the deadline. If you have a medical illness exceeding 3 days then submit your doctor's note in person to the instructor please.**

*How to submit assignments or the project*

**For an assignment or a project you must submit 1 (ONE) only MS Word file that includes the complete documentation for it, including any drawings, tables etc.**

Class assignments, tests, individual paper and the project are to be submitted ONLY via VISTA. Do not send them as attachments to ECSU emails.

If you cannot attach your assignment from home for any reason you have to use the computers in the labs at ECSU. If you cannot attach at ECSU as well you have to try another computer or you have to contact the ITD help desk for assistance with your user profile or your computer settings.

**Students in the teams for the project have to submit each the project report.**

**If one student is reported to me via Vista email by another that he/she does not prepare for group meetings (face to face or virtual) and does not cooperate for more than 7 days I have to be notified in Vista email by the other student asap.** Then we have to meet with the student at fault 15 mins before the next class session in class or in my office hours. *If a student continues not to perform for another week then the student will have an F grade for the course as the projects are an essential part of the final grade and will have to repeat the course. New teams will be formed of those remaining students.*

**All tests, midterm and final exam are closed book exams. Besides the tests and the midterm we will have also other work in each of those sessions to complete.** The final exam is on the Wednesday in the exam week at 7 pm.

**All work is done individually with exception of the team project. For an assignment or a project you must submit only 1 (ONE) only MS Word file that includes the complete documentation for it, including any drawings, tables etc.** Any drawings must be created in MS Visio and pasted in the Word report. An assignment will not be considered if any drawings are not inserted (pasted ) in the Word file.

### **Course Catalogue Description:**

Prerequisites: BIS370 or equivalent and senior standing

Capstone course in business information systems, open only to seniors. Focuses on the entrepreneurial and administrative tasks of a general manager who must formulate and implement strategy for a new or established IT business. Involves strategies for developing or modifying a firm's business model in light of the capabilities of information systems and the remaking of markets and management processes.

**Course learning objectives:** After the completion of the course you will be able to:

1. Develop an understanding about challenges of managing the IT function in a corporate IT environment.
2. Identify IS planning activities and IS strategy.
3. Understand IT infrastructure and issues of availability
4. Understand storage infrastructure: storage systems architecture and networked storage
5. Understand business continuity issues and management of the data center
6. Manage the IT function and understand the relevance of the Information Technology Infrastructure Library in IT management.
7. Develop ability to conduct a team project on IS strategic management.
8. Produce an individual research paper on a specific IT management topic.
9. Produce an electronic portfolio of artifacts documenting student learning.

**Personal development student goals:** This is a course on IT strategy formulation with emphasis on Storage Infrastructure Planning and writing competency development as the course satisfies also the requirements for step 3 writing course of the BIS program.

The course learning goals will be pursued through the parallel development of analytic and information search skills, communication skills, development of self discipline and ability to cope with change and work under pressure individually and in small teams. The students complete an individual research paper, receive feedback on it and then submit a final paper that is presented also to the whole class. They produce also a large project and weekly class assignments. Besides the foundations of IT strategic management and also on Information Storage and Management, you will be introduced also to one of the most important IT industry frameworks today, ITIL.

This course was developed with significant assistance by EMC Corporation to the BIS program through our participation in the EMC academic alliance program. EMC is kindly providing also prizes for the best student project and also for the best research paper.

**Methods and instructional materials employed:** The course objectives will be pursued through class discussions, small group work for revision purposes and individual work on a project, a research paper and weekly assignments. Please bring the textbook to class for each session.

### **How to Prepare for Class**

Prior to each class, please read, think about, and make notes of the key ideas, supporting arguments, and major issues presented in the readings and cases. When cases are assigned for class discussion, as a first level of preparation, you should be very familiar with the details of the case.

### **A Word on Class Attendance and Participation**

Class attendance is required in every session.

Considering the interactive nature of the class sessions, class participation is an important part of the learning experience in this course. Some students are shy, or come from backgrounds where speaking in class is not rewarded. I will endeavor to provide a supportive environment in class, and in return ask that you contribute to the class by participating in our discussions.

### **Class Participation Grade**

The class participation grade will reflect my judgment of the quality and quantity of your contribution during class sessions over the course of the semester. You should attend class prepared to discuss the assigned readings, answer questions, and contribute to class group discussion.

The following are some general guidelines that I use to grade class participation. It will be based on how you participate in threaded discussions and also on class work. If you almost never speak out in class or miss several classes, you will receive a participation grade no better than C. If you speak occasionally but rarely say anything inspired, your participation grade will be some sort of B (depending on how "occasionally" and how prepared you are). The path to an A participation grade involves things like, (1) applying conceptual material from the reading or the lecture, (2) doing a bit of outside reading and applying it in the class discussion, (3) integrating comments from previous students, (4) reaching back to something said previously in the discussion that is pertinent to the discussion at the moment, (5) taking substantive issue with a classmate's analysis, (6) pulling together material several places in the case and readings, (7) drawing parallels from previous cases and reading, (8) tying in briefly an experience you have had that is relevant to the discussion, (9) generally demonstrating that you have carefully read the assignments and give them careful thought. *I prefer not to call on students who do not raise their hands, but in the absence of volunteers, or if you have been silent in class for several sessions, you can expect to be called on to contribute.*

**Required textbook and readings:** PPTs on IT strategy, various papers provided in the Vista site and

**Information Storage and Management:** Storing, Managing and protecting Digital Information by EMC Education Services, Wiley, Indianapolis, 2009

Additional materials that are relevant for particular topics will be recommended in class through the course.

**Requirements for completion of the course:** To successfully complete this course the student must pass the examinations and complete the individual project, the individual research paper and weekly class assignments. Much of the learning in this course occurs during class. It is very important to be prepared for class and to join in the discussion.

Grading is as follows:

Midterm exam	10%
Project	20% (10 v.1, 10 v.2)
Research paper on a specific topic (individually)	20%(8 v1,8- for v2 and 4 for presentations)
Two tests 2 % and 5 % each	7%
7 class assignments, 4% each	28%
Class participation	5%
Final exam	10%

Your midterm grade is based on three class assignments and test1 or as a percentage out of 14.

Any required work has to be submitted in the links for it via Vista, typed, single spaced in 12pt font. Do not send it as attachments to ECSU emails or Vista emails.

No additional work for partially submitted class assignments will be accepted. The details of the deadlines are found below.

The class assignments require that the student is prepared in advance in order to finish the task in class within 100 minutes and submit it via Vista.

The **grading scale** will be 93-100 =A; 90-92=A-; 87-89=B+; 83-86=B; 80-82=B-; 77-79=C+; 72-76=C; 70-72=C-; 67-69=D+; 63-66=D; 60-62=D-, 0-59=F.

**Accommodation of students with disabilities:**

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the Office of AccessAbility Services at 465-5573. To avoid any delay in the receipt of accommodations, you should contact the Office of AccessAbility Services as soon as possible. Please understand that the instructor cannot provide accommodations based upon disability until she/he has received an accommodation letter from the Office of AccessAbility Services. Your cooperation is appreciated.

**COURSE SCHEDULE**

Schedule of sessions: Please bring your text books always to class.

**Schedule of t topics covered**

Unit	Lecture Topic	Reading Assign	Projects/Assignments Announcements
One, 01.26	<p>Introduction to IS strategy.</p> <p>On the relevant writing skills that you will practice in this course.</p>	<p>PPTs provided by the instructor plus papers in Vista</p>	<p>Each week the student is responsible to read the material covered during unit.</p>

Two 02.02	The steps in the IT strategy process Business models Alter – the WSM Introduction and its relevance for BIS461  On writing research papers	PPTs provided by the instructor plus papers in Vista  Read the Alter papers on the WSM from 2002 and his 2007 article in IBM Systems journal (provided in the Subject resources of Blackboard Vista).	WSM revision– work system snapshot and other work
Three 02.9	Managing IT infrastructure and revision	PPTs provided by the instructor plus papers in Vista  Revise past material	Class assignment 1 (CA1) due 02.9 Revision.  Students need to be prepared on the theory side in order to be ready to work in class)
Four 02-16, 02- 23 Two weeks	Revision ITIL Introduction	Read the ITIL ppts	Project Review  CA2 in class – 02.23 As –Is and To-Be analysis of the Business and its IT function in the case related to your project  Test 1 is on 02.23
Five 03.2, 03 9 Two weeks	03.02 – revision and Intro to storage technologies – ch 1  03.9- EMC book Storage technologies –ch , 2	Read the materials for this unit from the EMC book	CA3 03.2
Six 03 16 03.21-26 recess	EMC book Storage technologies ch 3 And revision	Read the materials for this unit from the EMC book	CA4 03.16 Midterm exam 03-16
Seven 03.30 And 04.6 Two weeks	EMC book Storage technologies ch 5, ch 6t  EMC book ch 7, 8, 9	Read the materials for this unit from the EMC book And additional materials in Vista	CA5 – 04.06 Submission of the completed first version of the individual research paper 03.29.

			Final version of the revised individual research paper due 04.10.
Eight 04.13	EMC book ch 11 And revision	Read the materials for this unit from the EMC book And additional materials in Vista	Student research paper presentations 04.13
Nine 04.20 and 04.27	Outsourcing Management fundamentals EMC book ch 12, ch 13,14,15	Read the materials for this unit from the EMC book And additional materials in Vista	CA6-4.20  Test 2 04.27 Team project due- 04. 29 (only one final version)
Ten 05.4 and 5.11	EMC book ch 16 ITIL and Storage technologies Revision,	Preparation for the exam	CA7 – 05.4

### **Academic Honesty and Writing Policy Statement**

Among the primary purposes of a university education is the development of abilities and attitudes necessary to engage thoughtfully and ethically with the ideas of others--so that you make fully, accurately, and appropriately clear in your writing (or speaking) where and how those others have influenced your thinking and your conclusions. These abilities and attitudes are generally part of the larger concept of "academic honesty."

Academic honesty involves taking responsibility for your own education, completing all work required of you on your own, and contributing thoughtfully and fully to any group work assigned or sanctioned by your instructors. In more straightforward terms, academic honesty means not cheating on tests and not plagiarizing. Generally, there are two kinds of plagiarism: intentional and unintentional. Acts of intentional plagiarism include turning in a paper obtained from a roommate, friend, or web site as your own, or cutting and pasting together a paper from several such sources.

According to the ECSU Student Handbook, Academic Misconduct is punishable in a number of ways, including expulsion from the university. Unintentional plagiarism usually occurs when students do not understand the rules and procedures for properly quoting, paraphrasing, and citing source information. As a rule of thumb, remember 1) for exact words (whether full sentences or phrases), use quotations marks or a block indentation, together with an in-text citation; 2) for a summary or paraphrase, show exactly where the source begins and exactly where it ends by introducing the borrowing with a comment about it and closing it with an in-text citation. If you have any questions

or concerns about this policy, it is your responsibility to raise them and ask for clarification until you are certain of its meaning.

## **Instructions on the individual research paper in BIS461**

**A student needs to consider at least 10-12 relevant sources for the topic and to present a synthesized argument** as a Word report and a PPT presentation – both to be submitted to the instructor by the deadline.

Each student needs to email me in Vista a plan and a list of the sources for their research within the first 2 weeks of the semester.

The student has to formulate in the introduction of the paper its goal and subgoals. The student needs to show ability to reason about the research question. It will help to explore the dimensions for evaluation of your research papers using the rubric for an individual research paper provided in unit 1 in Blackboard, showing descriptions of different levels of achievement.

When you start the research paper you need to consult the instructions on the stages in the writing process at the web site of the writing program of the University of Wisconsin, using the top link in the following page: <http://www.wisc.edu/writing/Handbook/> . You are writing a research paper, hence the need to check these instructions: <http://www.wisc.edu/writing/Handbook/PlanResearchPaper.html> and more specifically you are writing a review of literature: <http://www.wisc.edu/writing/Handbook/ReviewofLiterature.html>. You need to apply the APA method of referencing available at: <http://www.wisc.edu/writing/Handbook/Documentation.html> or a much simpler version called Harvard method of Referencing - see <http://dlibrary.acu.edu.au/library/skharvard.htm> . However if you know well any other method of referencing, please state that you are using a particular style explicitly and I will accept your paper using that particular style – see styles here <http://www.wisc.edu/writing/Handbook/Documentation.html> Please note that IT IS NOT acceptable to use your own improvisation on a reference style and expect to get a high grade.

**Please note that a research paper has to be planned first. Find at least 50 sources, explore their titles and abstracts, then reduce them to 20, browse through their abstracts and full text, from which you need to select the needed relevant sources which you have to read carefully . Note that at least seventy percent of the selected final sources have to come from refereed journal papers and the rest may come from trade magazines or electronic media. Please note that you need to do some cross referencing between the plan of your paper and the content of the selected articles before you start to write. This will provide you with several supporting references for each point in your plan of the paper. Avoid writing a sequence of**

**summaries of several papers that have no analytic value. Provide your assessment of the importance of a particular statement. Use where appropriate in your argument all references in the text, do not just list them at the end. Use references to provide credibility to your own work, to give credit to others who have written on the subject and also to provide a roadmap for someone to continue your work in the future.**

The dimensions of our rubric for the research papers include evaluations of your writing styles. Further instructions on that can be again found in: <http://www.wisc.edu/writing/Handbook/>. Your report needs to be in Word with clear formatting of a title, author, subject name and indication that this is an individual research paper.

**The body of the paper has to start with a summary abstract (written at the end of the writing process), introduction that defines the goal of the paper, outlines the historical evolution of the body of knowledge related to the paper topic, then the next section should present the accepted standard practice/procedures on the topic (e.g., if it is about IS change management – show the flow of activities in change management at least in one version, if possible in two alternative versions of the change management process that have to be compared) and in the next section outline several issues related to current research and development associated with the topic, followed by a conclusion and references.**

**Please note that the sample papers do not have necessarily this structure as it was not required in past years but you have to consider as much as possible the structure that is recommended above.**

The individual research papers are supposed to be at least 3000 words long but up to 3700-4000 words. Slight extensions of the upper limit are acceptable. Each paper will be completed individually. The paper (as a Word file) has to be submitted to the instructor by the deadline for the completed first version (8% of your grade). Then the student will get a feedback in the text of the paper and via a rubric. These will be used in the revision for the final version and then the paper will be presented to the class (8% of your final grade and presentation is 4%)

You have to submit with your paper also a ppt presentation that has to be showing the main points clearly and concisely. You have for the presentations only 7 minutes, hence consider what you can say in that time. No extensions will be possible. There will be 3 minutes for questions. See the rubric for assessment of presentations that is used in all courses in BIS at ECSU (just like the writing rubric is used in several selected courses by the faculty in BIS). Your presentations and your papers will be evaluated by several faculty members as I have informed you in class. You will be given a topic for the paper from the following list:

#### **TOPICS FOR INDIVIDUAL RESEARCH PAPERS IN BIS461**

1. The evolution of research on business and IT architecture.
2. Corporate IT architecture framework – current issues.
3. Change control In Information Systems Development – what is it and how can we manage it better via ITIL?
4. Problem control in IT management – current issues.
5. Service evaluation approaches and their comparison with the use of ITIL for service evaluation.
6. Investigate the Benefits from ITIL and how ITIL is implemented. Provide supporting facts from case studies on successful or poor implementation of ITIL.
7. Asset management in IT – traditional approaches and using ITIL for it.
8. Current issues in corporate document management and ways for its automation.
9. Issues and research in workflow management.
10. Risk assessment in Information technology operations management- current issues.
11. Risks in software development research.
12. Measuring the contribution of information technology to organizations.
13. Recent research on IT leadership issues.
14. Current issues in IT Human resource management research.
15. Current research in identifying possible applications, processes or technologies to be outsourced by an organization.
16. Research on managing the level of service and the relationships between clients and outsourcing providers.
17. State of the art in selecting a vendor for IT outsourcing.
18. Evaluation of risks in offshoring (IS outsourcing to foreign countries).
19. Managing the deployment of new information technology in organizations.
20. Management of privacy issues in IT.
21. Virtual collaboration teams and their management.

**You need to upload your very final version of the papers (*with a file name for the report that is exactly like the title of your topic and your surname added*) and the ppts (same file name, just .ppt extension) by the due date in the link for the final version of the research paper in Blackboard.** Attach both the word final document and the ppt at the same time. This will enable then the instructor will publish all papers in the last unit so that EVERYONE can read your paper. You may be given some tasks related to those papers later on.

Note that you need to identify the relevant sources yourselves. Our library gets online Communications of AIS and Information Systems Research (the latter also on paper) and a number of paper journals like Communications of ACM, IEEE Computer, ACM Transactions on Information Systems. **Several library databases like ABI Inform, EBSCO, the ACM digital library, the IEEE Computer Society digital library (the latter two are under Computer Science databases) and others contain numerous refereed IT journal papers and you have to use these resources in your work on the**

**paper.** Note that no more than 20% of your facts may come from other free internet sources which means also that almost no trade magazines should be used for your analysis, instead use refereed sources or quality, detailed industry publications).

## **BIS461 Project guidelines:**

You will be working in teams on this project. A set of case studies on different topics is provided by the instructor, available in Vista. The topics and the reading material on each case are provided separately by your instructor. You will use the information from the course materials( the book, the EMC materials and any other materials used in class (you will need to study some of these topics in advance on your own and other relevant sources).

### **Topic of the project**

On the basis of the information of the case study about **Metalco**, supplemented with any additional assumptions (including those provided by the instructor and those that might be needed and which you need to define in writing at the outset within your project report, develop:

**A strategic IS plan to sustain competitive advantage over the next 5 -10 years on the particular problem considering the technology described in the case as a description of the current situation and which should focus on the following two areas using deliverables from several of the assignments you have to complete:**

**1. On general IT strategy plan:**

**Define the mission, vision for the strategic plan,**

**Specify the starting assumptions**

**Provide WSM analysis, Porter's five forces analysis, SWOT analysis, Ansoff analysis for the current situation of the organization**

**Provide analysis of Business As Is (include in it also the business architecture)**

**Provide analysis of Info Technology AS IS (include in it also the IT architecture of the organization using the information from the first three lectures and also the current IT infrastructure).**

**Define the parameters of 2 scenarios that you apply in your plan.**

**Provide detailed definition for at least one of the scenarios for Business TO BE**

**Information Technology TO BE (include the future IT architecture of the organization and also the future IT infrastructure as a whole).**

**2. Plan for storage infrastructure needs**

**Design and justify appropriate information technology storage infrastructure for the organization for one scenario chosen. It should have evidence on these issues (further details are provided later in the text):**

- 1. Overall Storage Network Architecture that is optimized by using Information Lifecycle Management ;**

**providing suggested solutions for tiered storage based on access frequency and detailing the hardware and software components that will be needed to implement the strategy**

**2. Justification of your proposal that takes into account the following considerations about the way your solution supports: Scalability and Performance, Availability, Management, Backup/Recovery and Investment Protection**

You will use the information from the course materials ( the EMC book and any other materials used in class and other relevant sources that you will have to identify, as well your assignments 1,2 and 6 and partially some of the knowledge from assignments 3,4 and 5). If appropriate the proposed alternative or options need to be prioritized using SMART. You need to apply the work systems snapshot and other relevant aspects of the definition of the problem in the work system method approach, analysis of the work system life cycle for the problem, apply SWOT analysis and Porter competitive forces analysis.

**Additional guidelines**

The completed projects need not to be longer than 20 pages single spaced text, including any figures and tables and list of references. They need to be submitted first as a fully completed draft according to the schedule in the syllabus and then in a revised form after getting feedback from the instructor, according to the deadlines in the syllabus.

The project defense will take place on a date to be announced by the instructor in the syllabus schedule and the best projects are expected to participate in the School Student Research Excellence Expo.

The students are encouraged to seek consultations on the project at latest two weeks before the deadline for the first full version as afterwards they will not have any time to complete the project. Hence the work needs to be planned well.

**Please note that you have to provide where necessary starting assumptions for those details that are not available in your project case.**

**Please note that some weekly class assignments are informing you on most of what will be in your answer to task 1 of the project s defined above and on task 2.**

**The body of the project report has to start with a summary abstract (written at the end), introduction and sections with clear self explanatory specific titles, all text and figures in ONE word file followed by a conclusion and references.**

**About part 2 – some further details:**

The goal of this part is to create a high-level design for a centralized, fault-tolerant, and high-speed data storage solution that supports managing data across multiple departments

and provides for fast backup of mission-critical data for the company described in your case. Using the starting assumptions relevant to your case (provided separately by your instructor), it is your responsibility to create a solution that meets the storage needs of the company.

Most of the ideas for this part of the project are used with permission from Dr Cameron from State University of Pennsylvania, College Park. PA.

The goal of this part is to create a high-level design for a centralized, fault-tolerant, and high-speed data storage solution that supports managing data across multiple departments and provides for fast backup of mission-critical data for the company described in your case. Using the starting assumptions relevant to your case (provided separately by your instructor), it is your responsibility to create a solution that meets the needs of the company.

### **What Do You Need to Do in part 2?**

You will create a 3-4 page document that describes a proposed solution for your case company. Your proposed solution must address all of the issues outlined in the section below titled “Solution Requirements for part 2.”

To submit your work to your instructor, add this part of the project to the first part in one file and submit via Blackboard.

Your work in the second part should demonstrate your ability to:

- Use acronyms and terminology associated with Fibre Channel and SAN technologies
- Identify the SAN technologies that meet a set of requirements for a storage networking solution, including:
  - High-availability requirements
  - Scalability requirements
  - Performance requirements
  - Management requirements
- Discuss the features and benefits of various storage networking technologies
- Present a compelling business case for a storage networking solution

Relevant Topics are based on the material covered in the EMC book.

General assumptions about your company needs:

-The new infrastructure should allow the company to grow, it wants to centralize data storage and management across multiple departments while boosting the reliability, scalability, and performance of their mission-critical databases. They need:

- The ability to scale the performance of their mission-critical databases
- A major improvement in disk access speed and data retrieval
- A significant decrease in time spent backing up and restoring data
- A dramatic increase in system reliability and manageability, without incurring the cost of implementing fully redundant server complexes

Your company existing environment assumptions will be provided to you by your instructor

## **Solution Requirements for part 2**

Below is a list of requirements that your solution must meet. In your document, be sure to use appropriate SAN Fibre Channel terminology while providing strategies, information, and ideas that will help the company solve their networking and storage issues outlined below.

Focus on identifying technologies that meet each need, rather than specific products. For example, if you determine that the solution requires data replication, you should specify the type of data replication, such as mirroring, snapshot, or remote copy, but you do not need to identify specific data replication products. You can, however, identify specific products if you believe that those products contribute unique features or capabilities to the solution.

NOTE: You are not required to draw a topology diagram to illustrate your solution. However, you can include a diagram if you want.

## **Further pay attention to these issues when working on part 2:**

### **Overall Storage Network Architecture**

Make sure the configuration you have chosen is based on a valid SAN topology, and includes the use of Fibre Channel SAN technologies covered within the course materials. Be sure to identify:

- What types of, and how many, hubs and/or switches are required
- Where redundant components and links should be used
- A SAN topology that is valid for the company's current needs, and that can grow to accommodate a reasonable amount of growth

### **Justification**

Why should the company invest in storage networking technologies? Discuss the benefits that your solution provides. Present a brief business case for your solution.

### **Scalability and Performance**

The company is growing rapidly, and needs a storage networking solution that can scale quickly, and maintain adequate SAN performance under high traffic conditions. They need to be able to add storage capacity quickly without taking applications offline. IT also needs a way to effectively manage and scale application performance.

You must identify a strategy that is scalable and maintains a high level of performance at both the SAN and application levels. What aspects of their existing infrastructure need to change to will allow for this to happen?

### **Availability**

The company would like to have a configuration that is 99.999% available. They are looking for a solution that will allow them to quickly recover from component failures. High availability is a priority, although IT cannot afford the expense of a fully disaster-tolerant configuration. What other options does the company have that will boost the availability of their infrastructure?

### **Management**

Storage resources for both NT and HP-UX servers should be managed from a single location, and ideally, with a single management application. IT has determined that existing storage capacity is underutilized.

Each server “owns” a discrete piece of storage, and systems administrators usually allocate far more storage than the application really needs to prevent potential capacity problems in the future. IT wants to find a way to ensure that available capacity is more fully utilized. How should the company go about doing this?

### **Connectivity**

Specify only whether hubs or switches/directors would be useful and leave out the details of the implementation

### **Backup/Recovery**

The company currently does not have a fast and efficient backup and recovery strategy. Currently, backups take hours, and applications must be taken offline while a backup is in progress. This reduces the availability of their service, and requires IT staff to work overnight. Your solution must provide for reduced backup and recovery times. How can this be accomplished?

### **Investment Protection**

The company recently purchased two expensive LAN-attached SCSI tape libraries, and **IT management** would like to preserve that investment. How can your solution provide a more robust backup and recovery solution while utilizing this existing equipment?

The above dimensions need to be considered in part 2 of your project.

**Assessment Rubric for Individual Research Papers in BIS461**  
**(Adapted from a rubric published at the web site of the writing center**  
**of SUNY NewPaltz)**

Student Name: \_\_\_\_\_

<b>Criteria</b>	<b>Incomplete</b>	<b>Needs Work</b>	<b>Good</b>	<b>Excellent</b>
<b>Thesis/goal</b>	No thesis. Paper is not focused.	Thesis is vague, too obvious, or not stated clearly.	Thesis is clear, explained well.	Thesis is interesting and original. Well structured introduction.
<b>Organization</b>	Paper is unfocused. Paragraphs are not organized logically. Points are unrelated to thesis.	Paragraphs lack full cohesion. Transitions between points are needed. Some points seem out of place and/or not related to thesis.	Clear and cohesive structure to the paper. Argument is developed logically.	Organization makes for a persuasive and articulate argument.
<b>Analysis</b>	Paper lacks any analysis.	Paper makes a number of points but some are not analyzed fully using an IT perspective.	Most points are analyzed from IS management point of view. Good understanding of seeing the bigger picture. Points are related to larger IS themes.	Interesting, informative, and impressive analysis. A solid grasp of IS theories and perspectives is clearly demonstrated.
<b>Support</b>	No examples given to support argument.	Some points are unsupported. Some examples don't relate to the thesis.	Each point is supported by good examples. Examples relate to thesis.	Evidence cited is original and insightful. Makes for a very strong argument.
<b>Use of texts</b>	No reference to text(s) or incomplete citations.	Minimal reference to texts. Direct quotations over used or are unrelated to main point. Quotations are not introduced properly.	Most textual references are used appropriately. Quotes are introduced within context of argument.	Excellent use of texts to strengthen argument and drive home point.
<b>Clarity of Expression</b>	Sentences are difficult to understand. Words are misused.	Some sentences are awkward. Language may be vague and ambiguous.	Most sentences are clear, unambiguous, and connect logically to preceding sentences.	Eloquent language and fluid prose.
<b>Grammar/Mechanics</b>	Many errors in grammar, spelling, punctuation, etc.	Some errors in grammar, spelling, punctuation.	Very few errors in grammar, spelling, punctuation.	No errors in grammar, spelling, punctuation.

Student Name: \_\_\_\_\_ Instructor:.....

## A RUBRIC FOR PROJECT ASSESSMENT IN BIS 461 SEMINAR IN IS AND BUSINESS STRATEGY

The rubric aims to evaluate the following learning outcomes:

1. Ability to analyze a business strategy and information systems infrastructure strategy and their alignment.
2. Ability to present the findings of the project within the report including time management issues
3. Ability to provide a convincing presentation.

Hence the following rubrics were defined for the evaluation of the project report:

Criterion	Definition of rubrics on a scale of proficiency (1-4)			
	Beginning 1	Developing 2	Accomplished 3	Exemplary 4
<b>1. Ability to define IS strategy</b>				
1.1. Correct application of the IS strategy theory and understanding of storage infrastructure technologies	Inappropriate	Partial	Well defined	Results analyzed
1.2. Appropriate data collection and assumptions	No evidence	Secondary	Primary relevant sources	Integrated sources
1.3. Are the conclusions in line with the factors for alignment between business and IS strategy	No evidence	Occasional	Good evidence	Evidence and good analysis
<b>2. Problem solving skills and ability to organize information:</b>				
2.1. To what extent is the organization of the project relevant for conveying the IS infrastructure strategy in line with the existing body of knowledge in IS strategy	No evidence	Partial	Good - no justification	Excellent - well justified
2.2. Is there evidence of critical appraisal of the aspects of the project or is it just a descriptive exposition	No evidence	Occasional	Attempted- minor errors	Critical appraisal no errors
2.3. Is there a summary linking the suggestions to the problem on hand	No attempt	Somewhat	Attempted	Well defined
<b>3. Interpersonal, project skills</b>				
3.1. Have the main points to emerge from the project being picked up for discussion?	No evidence	Occasional	Good evidence	Evidence and analysis
3.2. Is there a consideration on the resources needed for the suggested transformation and the schedule?	No appraisal	Occasional	Attempted minor errors	Well defined- no errors
3.3. Was the project developed within the time allocated for the phases?	Late	Mostly on time	On time	On time and with no errors
<b>4. Presentation</b>				
4.1. Clarity of explanation and conclusions	Lacking	Satisfactory	Very good	Excellent
4.2. Visual impact of the presentation	No	Only text	PPTS with color	Well designed
4.3. Use of audio visual aids, body language	Poor	Satisfactory	Very good	Excellent
4.4. Response to questions	Poor	Satisfactory	Very good	Excellent

