

**Eastern Connecticut State University**  
**SCHOOL OF EDUCATION AND PROFESSIONAL STUDIES**  
*DEPARTMENT OF BUSINESS ADMINISTRATION*  
**Systems Analysis and Design (BIS 370) 3.0 CREDITS**  
**Fall 2008**

T/R, Webb 307, 5.30-6.45pm,

**Instructor:** Dr Don Petkov, office WH446, Office tel (860) 465 0264 or (860)465 4667 (secretary), email [petkovd@easternct.edu](mailto:petkovd@easternct.edu), web site: ECSU site-Faculty/Staff-Petkov or <http://www.easternct.edu/personal/faculty/petkovd/index.html>

**Student consultations** during office hours: Tuesday 3.30 pm-5.15pm; Wed 6.45-8.00 pm; Thursday 11 am - 12.30 pm, 4.45 pm - 5.15 pm; The students are expected to check the course web site at least twice a week for instructions related to the course.

**Student consultations** during office hours and by appointment.

Students should check the webct/VISTA site for the course and their webct/VISTA email at least twice a week for instructions related to the course.

Students should provide the instructor with a working email address to allow urgent communication. However the main communication with the instructor and the students will be only via the webct email system and anything else needs to be used only in case of a last resort. The students are expected to check the course web site in WebCT at least three times a week for instructions related to the course.

**Deadlines are declared in the schedule below and in the links for the corresponding elements in webct, by 11 pm** on the particular day. It is very important that you stick to them. You can submit without penalty within 7 days from the deadline which usually captures all cases of short trips or short illness. **If a submission is made between 7 and 10 days after the deadline for whatever reason, the penalty will be 20% of the corresponding grade. If a submission is made after 10 days past a deadline but no later than the evening of December 15th 2008, then the penalty will be 30%.** No submissions will be accepted after that date.

***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.**

Any drawings must be created in MS Visio (you must obtain a copy as an ECSU student by consulting with the staff in Webb 410. Please note that **you must not submit any separate files with drawings in Visio format – instead any drawing must be pasted in the respective MS Word document with answers for the particular assignment or project.** This is a very important rule as an assignment will not be considered if any drawings are not inserted (pasted) in the Word file.

You do not need MS Project software as we cover only the principles of project management in chapter 2 while the BIS program has a separate subject BIS442 on IT Project management when you will need that project. You will be drawing Gantt charts in this course by using either MS Excel as its rows and columns allow to express well activities and their durations or any other package that allows you to draw them.

**Course Catalogue Description BIS370:**

Prerequisites: BIS361 or equivalent

Provides basic techniques for systems design and development, focusing on the links between BIS systems and their users. Explores the roles of systems analysts and project managers, and the modeling and design tasks that they face. Includes implementation of application packages and enterprise resource planning.

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

1. Develop an understanding about the major concepts applicable to systems analysis and design.

2. Understand and apply the work system method to analysis of business problems.
3. Identify the types of systems models that are relevant for each phase of systems analysis and design and focus on Object Oriented Models.
4. Understand management issues in analysis and design.
5. Apply software packages for systems modeling and project management.
6. Develop ability to conduct a team analysis and design project.

**Personal development student goals:** The above 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.

**Methods and instructional materials employed:** The course objectives will be pursued through class discussions, small group work on a project, work with the textbook (bring it to class please), through homeworks, library and Internet search.

**Required textbooks:** J Valacich, J George, J Hoffer, Essentials of Systems Analysis and Design, Third Ed, Prentice Hall 2006 .  
S Alter, articles on the The Work System Method,

Additional materials that are relevant for particular topics will be recommended in class additionally. You have to prepare in advance for every week, following the schedule below.

**Requirements for completion of the course:** To successfully complete this course the student must pass the examinations and complete the term project and assignments. Grading is as follows:

Midterm exam	10%
Group Term project	30%
Two quizzes 4 and 6% each	10%
6 Individual homeworks	24%
Class/online participation	6%
Final exam	20%

You will be getting your project description in the form of a detailed case study describing the results of the requirements determination phase of a project. You will find instructions on the deliverables from the project in the are describing your projects in the webct site for this course.

Your midterm grade is based on H1, H2, Midterm test and Quiz1.

Homeworks, quizzes, tests, projects are to be submitted ONLY via WEBCT /VISTA unless otherwise instructed in a specific case. Do not send them as attachments to ECSU emails. The deadlines are to be observed. See the policy on penalties above. If you miss a quiz or a test, please provide a certificate to the instructor at the make-up quiz/test to be held always 7 days after the original one at 5 pm in class.

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.

### COURSE SCHEDULE

Schedule of sessions: Sometimes there will be lectures, sometimes video presentations or small group work. The student is supposed to prepare for each session in advance covering on their own the material. The sessions in class will be in the form of a review of important highlights of the particular chapter, quizzes and exercises. Please bring your text books always to class.

Unit	Lecture Topic	Reading Assign	Projects/Assignments
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			<b>Announcements</b>
One, starting 09.02	Introduction To The Course. Ch 1 Valacich Alter, the paper on the WSM	Ch 1 Valacich Alter the paper on WSM in Subject resources	Project assignment and team formation- teams of 3-4 students to be sent to you in a Blackboard email.
Two 09.08	Ch 2 . Valacich  Alter's paper s on WSM including the 2003 paper and the 2008 paper where you can see an example of a work system snapshot	Ch 2 . Valacich  Alter's papers on WSM	Hk1 due 09.09.
Three 09.15	Ch 3 . Valacich	Ch 3 . Valacich	Test 1 is on 09.16
Four 09.22	Revision Ch 4, Valacich	Revision of all previous material Ch 4, Valacich	H2 is due 09.23  Project assessment by each team- any questions to be asked in the chat session on 09.23 or before that by webct email.

Five 09.29 and 10.06	Ch 3-4 by Stumpf on Event and use case modeling,	Ch 3-4 by Stumpf on Event and use case modeling,	Midterm is on 10.9  Project work by each team
Six 10.13	<i>Revision</i> Ch 3-4 by Stumpf Ch 6 Valacich	Ch 3-4 by Stumpf on Event and use case modeling, revision, Ch 6 Valacich	H3 is due 10.14
Seven 10.20 and 10.27	Ch 6 Valacich (cont.) Ch 7 Valacich	Ch 6 Valacich (cont.) Ch 7 Valacich	Student teams are very strongly encouraged to ask for feedback on their fully completed projects including project outcomes 1- 10 by submitting their document via webct email attachments or in person(only one student from a team) by 11.13 at the very latest as after that it is too late to ask for advice on the project please.
Eight 11.03 and 11.10	Ch 8 Valacich	Ch 8 Valacich	Hk4 is due 11.04
Nine 11.17 and 11.24, recess	Ch 8 Valacich cont Ch 10 Valacich	Ch 8 Valacich cont Ch 10 Valacich	Hk5 is due June 11.25
Ten 12.01 and 12.08	Ch 10 Valacich Revision project evaluation	Ch 10 Valacich Revision Project evaluation	Hk6 is due 12.09 Test 2 is on 12.02  The Project is due 12.04- (reflect the feedback from your advisor and add also outcomes 11-14 to the first version you submitted earlier by email) submission of both Word file and PPT

			presentation file in the respective link in Blackboard for the project please. Project presentations/walkthroughs 12.09
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**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 note that I cannot provide accommodations based upon disability until I have received an accommodation letter from the Office of AccessAbility Services. Your cooperation is appreciated.

**WEB RESOURCES FOR THE STUDENT IN SAD – the site of the book:**

[http://wps.prenhall.com/bp\\_valacich\\_esad\\_3](http://wps.prenhall.com/bp_valacich_esad_3)

**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.

**BIS370 Project deliverables**

**The project documentation is in the form of ONE MS Word 2003 file that needs to have all the components listed. You must submit separately also any spreadsheet models as Excel 2003 or 2007 files but those must be also pasted in the Word document:**

1. Define the mission of the business, the mission of this information system.
2. Provide for the system you are investigating (do not explain theory but apply it) the following types of WSM analysis: work system snapshot; identification of the system and the problem; analyze the work system and identify possibilities for improvement, recommend changes to the work system and justify those changes. You need to demonstrate that you have used the work system method at least at levels 1 and 2 following Alter. This analysis should focus on the work system and only then you will be prepared to discuss the relevant new IT system.
3. Describe the IT project scope. Define possible alternative IT solutions.
4. Conduct detailed technical, organizational and economic feasibility of the project. If necessary provide some starting relevant assumptions. Use specific numbers in those assumptions and conduct the economic

feasibility with them. Provide relevant analysis of every type of feasibility (not general theorizing on what that means but conduct the feasibility analysis!)

5. Divide the project into manageable tasks and subsystems. Define their boundaries and interfaces.
6. Create a preliminary project schedule in the form of a Gantt chart.
7. Identify and assess realistically the various types of risks with this project.
8. Develop statement of work for this project.
9. Conduct event analysis and document it. Produce the relevant event table.
10. Draw all use case diagrams for this project and prepare use case descriptions at summary (kite) level using the template in Stumpf ch 4.
11. Produce the entity relationship model without any not-simplified M:N relationships, showing all data attributes for every entity, min and max cardinalities within the specified scope.
12. Design the necessary input and outputs for the system and all elements of the human interface. List all inputs and all outputs. Provide the dialogue diagram for the system. Provide detailed design for at least 3 inputs (at least one document and 2 screens) and 3 outputs (at least one printed and two screen reports).
13. Suggest and justify the appropriate design strategy.
14. Define a plan for testing, including as examples at least 3 illustrative test cases.
15. Produce a brief plan for implementation and installation of the system.

## **YOUR PROJECT TOPIC DESCRIPTION**

**Your project is to design a computer based information system for a County Pediatric Medical Center . The description of the requirements that are usually derived through the requirements analysis methods (reflected in chapters 2-4 of the Valacich book) is summarized in the paper by R Ballenger from Journal of IS Education Vol 14 (3) 275-282.**

If necessary please add any assumptions on needed data (like those that are needed for some of the feasibility analysis) then these need to be specified in your project document. Your documentation needs to contain the deliverables listed here.

**I have included a good sample project document from past years: on a system for a publishing company. It gives you a good idea about what is an outstanding quality and depth in working on the project, though it does not have an ERD.** In essence you should be driven by the above list of the required Project deliverables.

It will be useful for you to study the solutions of various problems provided in the units (see the files labeled Notes...in each unit) for training purposes before you work on your project.