Systems Analysis and Design (BCIS 350/540) Fall 2013; Online  
Instructor: Jennifer Kreie  
Classes:  
MWF 9:30-10:20, BCIS 338 in BC 102  
MWF 10:30-11:20, BCIS 338 in BC 102  
MW 11:30-12:45, BCIS 485/560 in BC 115  
Online BCIS 350/540  
Office: Guthrie 318  
Office phone: 646-2990  
Send email through Canvas.  
Canvas: http://learn.nmsu.edu/  
Office Hours: Wed. 12:30-1:30 in GU 303 (computer classroom)  
Thurs. 12:00-2:00 online (Adobe Connect)  
Thurs. 2:00-3:00 in GU 318 (my office)  
Fri. 11:30-noon in BC 115 (computer classroom) or by appointment  

Text: A textbook is not assigned for this course. We will use online resources and several handouts and videos I have developed for this course. In previous semesters we have used "Modern Systems Analysis and Design," J. A. Hoffer, J. F. George, J. S. Valacich, Prentice Hall. A copy of this book is in the BC lab and available for use while you're in the lab if you want an additional source of information about analysis and design.

Software: Some of software required for this course is available for you to install on your PC with the Windows operating systems. The software is also available in the BC lab (3rd floor) and in the computer classrooms (rooms which are only available during my office hours Monday, Wednesday and Friday). Software that you can install: MS Project 2010 (available through a license agreement with Microsoft), Oracle SQL Developer (version 3.2.20.09, and Oracle Data Modeler (version 3.3.0-747).  

You will receive an email from Microsoft's Dreamspark shortly after the semester begins which will explain how to register and get software for free as a student in a BCIS course. NOTE: This message will go to your NMSU email account. Be sure to check it.  

The Oracle software is available at the Oracle web site (links are provided in Canvas) and it is free to download and install. You may have to create an account at Oracle's TechNet site prior to downloading. There is no charge for this.  

You will use Oracle APEX (Application Express) a great deal during the semester. APEX is a developer tool (as known as a CASE tool) which enables you to build databases and create web-based applications within a short time frame. You must use the database server and APEX provided. This is available through most web browsers. Accounts and connection information will be provided through Canvas. (If you want to download Oracle XE for your own use and practice, that's fine. However, you cannot use your individual installation to complete the assignments in this class. They must be done on the server provided.)  

Course Description - This course teaches the application of software engineering techniques in the information systems life cycle. There is an emphasis on project management and formal techniques for doing analysis, design, and implementation. Use of various software engineering analysis and design tools and techniques are covered: information gathering for defining system requirements, entity-relationship diagrams, data flow diagrams, data dictionaries, and prototyping. The course will also present current topics, such as extreme programming, rapid application development (RAD), and the Unified Modeling Language (UML). This course will provide hands-on practice with project management and systems development through exercises in PERT/CPM, user requirements gathering, data and process modeling, prototyping. Prerequisite: BCIS 222 (or taken concurrently).  

Course Objectives - The student who completes this course should know:  

1. The traditional and RAD (Rapid Application Development) systems development methodologies.  
2. Traditional analysis and design techniques for data and process modeling: entity-relationship diagrams, physical database design, and data flow diagrams.  
3. Relational database terminology and design concepts.  
4. How to use prototyping in the analysis and design phases of systems development.  
5. Project planning: defining the scope, purpose and activities of a project; setting up a project management web page.  
6. PERT/CPM project management techniques, including the use of Microsoft Project software.  
7. What a CASE (computer-aided systems engineering) tool is and how it is used in software development.  

Examinations - There will be two exams. Both exams will be given on campus or must be proctored. Students within 75 miles of campus must take their exams at NMSU main campus while those further than 75 miles from campus must find and register their own proctors no later than one week prior to each exam. The exams will cover material in handouts, online resources, assignments and videos. The third exam is the final exam. It covers the material since the second exam and any material, such as systems modeling, that is studied throughout the semester. Exams will be a combination of multiple choice, short answer, and problems.  

If you miss an exam due to illness, work, or a university-sponsored activity, you must provide proper notification to the instructor as soon as possible. If no valid excuse is provided the student will receive a score of zero for the missed exam.
Exercises and Quizzes - Unless otherwise stated, assignments and quizzes are assigned as individual work. You must complete these on your own (see the scholastic dishonesty section below). It is important that you practice and master the techniques being taught. Most of these will be used throughout the semester so you can learn the techniques and see how to apply them in a development life cycle.

No late quizzes will be accepted. Late assignments will only be accepted within 24 hours of the due date and there will be a 20% late penalty. Beyond 24 hours after the due date, assignments will not be accepted.

Projects - You will apply what you learn in this course. The first third of the semester covers the concepts and techniques you'll use in the projects assigned throughout the semester. There will be three projects: 1) a tutorial that introduces Oracle APEX as a RAD tool, 2) a project for which much of the planning, analysis and modeling has been done which provides the basis for you to create a working prototyping using Oracle APEX, and 3) a final project in which you take on the role of systems analyst--planning and documenting the project, creating the models and constructing the prototype. You will create a short video of your final project so you have something after this course ends to show what you accomplished.

Project Web Site: You will create a project web site for the second and third projects. This web site will contain the project documentation. Prior to these projects, there will be a few exercises, handouts and videos that will explain how to create web pages and post them in your NMSU account so they are available via the Internet.

Graduate Students - Graduate students will complete an additional component for this course. This component will be posted before November.

Communication With Instructor - Discussion threads will be available in Canvas for questions regarding course material. Post questions about assignments and course material in the discussion threads so everyone can benefit from questions and answers. Do not send individual emails about course materials and assignments. I will respond as quickly as possible, usually within 24 hours except on Saturdays. For personal questions related to this course, send email through Canvas, NOT regular NMSU email.

I have online office hours on Thursday mornings (see top of page). You'll find a hyperlink to Adobe Connect in Canvas for this course. We can use Adobe Connect for other times, if we agree on a day/time to meet. I also have office hours scheduled in a computer classroom 3 times a week (see office hours listed at the top of this syllabus).

Study and Participation - The nature of this course and its online format requires that you stay up-to-date with the schedule and actively participate--read material, ask questions, and complete assignments on time. Begin work on assignments with ample time to complete the work, including posting questions and receiving answers. As this course progresses the amount of time allocated for some assignments will be longer but that means the assignment requires more time to complete. For example, if an assignment is released with a deadline two weeks away, you should begin the assignment right away so that you have time to complete the work on time, including raising questions and overcoming technical issues.

Students with Disabilities - relating to disability and accommodations. If a student has questions or needs an accommodation in the classroom (all medical information is treated confidentially), contact: Trudy Luken, Student Accessibility Services (SAS) – Corbett Center, Room 244, Phone: 646-6840 Email: sas@nmsu.edu, Website: www.nmsu.edu/~ssd/

Miscellaneous Policies

- Although I will try to maintain the class schedule and objectives, I may need to make adjustments.
- Office hours: When I have to attend a meeting or other event during my office hours, I will post a message in Canvas. I'm often in my office even when I don't have office hours and you're welcome to call or come by outside of office hours but if you're making a special trip to campus, please call first to confirm that I'm in my office and that I don't step away and miss you.
- NMSU policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status. Furthermore, Title IX prohibits sex discrimination to include sexual misconduct, sexual violence, sexual harassment and retaliation. For more information on discrimination issues,

  Title IX or NMSU's complaint process contact: Gerard Nevarez or Agustin Diaz, Office of Institutional Equity (OIE) – O'Loughlin House, Phone: 646-3635 Email: equity@nmsu.edu, Website: www.nmsu.edu/~eeo

Scholastic Dishonesty - Students are expected to conduct themselves with integrity in this course. Academic dishonesty will not be tolerated. For the purposes of this course, academic dishonesty includes, but is not limited to: copying another student's work or allowing another student to copy your work, or copying material from online resources and submitting as your work, or using any unapproved resources during exams.

The penalty for dishonest behavior can range from receiving a zero for an assignment or exam to censure from the University (Please refer to the NMSU Student Handbook http://www.nmsu.edu/~vpsa/handbook.html).
### Point Distribution and Grades

The points possible for this course will be approximately as follows:

<table>
<thead>
<tr>
<th></th>
<th>Estimated Pts</th>
<th>Est. % of Overall Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>110</td>
<td>16%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>120</td>
<td>17%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>60</td>
<td>9%</td>
</tr>
<tr>
<td>Exercises</td>
<td>100</td>
<td>14%</td>
</tr>
<tr>
<td>1st project (tutorial)</td>
<td>80</td>
<td>11%</td>
</tr>
<tr>
<td>2nd Project</td>
<td>100</td>
<td>14%</td>
</tr>
<tr>
<td>Final Project (including video)</td>
<td>135</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Total Points</strong></td>
<td><strong>705</strong></td>
<td></td>
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</tbody>
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Grades will be assigned as follows:

- 90% through 100%  A
- 80% through 89%  B
- 70% through 79%  C
- 60% through 69%  D
- Below 60%  F