CIS 420-01 – CIS Development Project (Spring 2012)

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Course Websites	http://blackboard.louisville.edu http://www.gou-online.net/

Prerequisites:

- Current – CIS 310, CIS 320, and CIS 350.
- Previous – CIS 310, CIS 215 or CIS 315, CIS 320, and CIS 360.

Course Description:

A continuation of CIS 320. Focuses on the detailed design and implementation phases of the system development life cycle, including user acceptance testing, test planning, design reviews, and change procedures. Specifications created in CIS 320 are used to implement, test, and install a working version of an information system. System deployment emphasizes a web-based architecture. A prototyping approach is taken to develop and test the system in an iterative manner. Students are grouped into project teams, and each team member accepts task assignments necessary to deliver the information system prototype.

Course Objectives:

- To participate in planning of information systems development activities, and to monitor and to report progress with respect to plan expectations.
- To apply iterative development techniques to design and to implement an information system.
- To design an information system using object-oriented modeling techniques.
- To demonstrate an understanding of system implementation practices, including topics such as design patterns, development frameworks, Platform-as-a-Service (PaaS), Software-as-a-service (SaaS), code versioning, software integration, and testing.
- To implement an information system in accordance with design models and standard practices.
- To apply systems technologies acquired in previous courses to the development of an information system.
- To refine written and oral communication skills.
- To take the initiative in developing a software solution and in contributing to/leading group activities.

- To gain practical experience in group decision-making and in functioning as a member of an information systems development team.

Texts:

- **Required** – Agile Principles, Patterns, and Practices in C#, Martin and Martin, Prentice Hall, 2007.
- **Required** - Nixon, R., (2009) Learning PHP, MySQL, and JavaScript, O'Reilly Media. ISBN:978-0-596-15713-5
- Recommended – Force Platform Fundamentals: An Introduction to Custom Application Development in the Cloud, McGuire, Roth, Carroll, Tran, salesforce.com, 2000-2008.
- Recommended – The Developer's Guide to the Force.com Platform, Greenwald, salesforce.com, 2000-2009.
- Recommended – Force Platform Cookbook: Code Samples and Best Practices, Anderson et al, salesforce.com, 2000-2008.
- Reference – UML 2 and the Unified Process: Practical Object-Oriented Analysis and Design, Second Edition, Arlow and Neustadt, Addison-Wesley, 2005.
- Reference – Object-oriented systems analysis and design text from CIS 320.

Planning and Review Sessions:

System features will be described as user stories; i.e., expected system capabilities. During weekly planning sessions, each student will participate actively in the discussion of user stories for the current iteration. The planning session will result in the assignment of user stories to each student. Subsequently, the student "owns" each assigned user story. Ownership entails full responsibility for the story, from its initial description as a set of tasks through its deployment as part of the solution. Each student should be prepared to discuss the status of her/his user stories during the weekly iteration reviews. Full documentation of deliverables and adherence to development standards is expected for the design and implementation of all user stories.

Client Interactions

To ensure that the information system meets the client's expectations, student teams may be asked to conduct demonstrations/reviews and planning sessions with the client outside of class. These sessions may be conducted in the project's downtown office in the ArtSpace Building, 323 W. Broadway, Room 502, or at the client's facility.

Assignments:

Individual assignments help the student acquire a broader understanding of systems development practices and technologies. Assignment expectations will be discussed in class prior to its due date.

Progress Reports:

Progress reports provide the instructor with students' perspectives on team activities, progress, and problems. Each student should submit a report for each iteration, as listed on the course schedule, unless the instructor indicates otherwise. The report should relate directly to the planning session and assigned user stories. As a minimum, the report should include a section addressing each of the following points:

(1) The user stories that were assigned for the current iteration and the point value of each one.
(2) The activities conducted to complete each user story. Describe design activities, including refactorings of previous designs, and coding activities. Describe any circumstances that made completion of the user stories unusual or significant.

(3) The artifacts produced as a result of these activities. List the source code files, classes/objects, methods/processes, and user interface elements that were created, changed, and/or deleted.
(4) Evidence to document completion of the user story, including test data and screen captures of user interface design options/decisions.
(5) Interactions with and contributions of your team members and instructor/team lead (as applicable). Take this opportunity to provide constructive criticism and feedback regarding any areas where your members contributed more or less than expected. Also, use this section to comment on the guidance provided by your instructor/team lead.

These points should be prepared for submission as a professional communication to management; i.e., handwritten submissions will not be accepted.

Peer Evaluations:

Peer evaluations may be conducted periodically throughout the semester. The peer evaluations are intended to be constructive in nature, documenting the strengths and weaknesses of your fellow students. These evaluations will be treated confidentially by the instructor. If a student's contributions are lower than expected, the student may be interviewed by the instructor to evaluate the situation. **Peer evaluations are an important component of professional development and team building, and they should be considered thoughtfully and prepared objectively.**

Late Submissions:

All assigned tasks are expected to be submitted on their due dates. The following penalties will be levied against late submissions.

- Iteration review/deliverable:
  - No deduction if submitted one class period late if substantial progress is demonstrated, including documentation that is nearly complete, on the due date.
  - 25% deduction if submitted one class period late if less than the substantial progress is demonstrated on the due date.
  - 50% deduction if submitted between one and two class periods late.
  - 100% deduction (no credit) if submitted more than two class periods late.
  - Note: late penalties may be waived in extenuating circumstances if approved by the instructor/team lead.
- Iteration revisit:
  - 100% deduction (no credit) if submitted more than one week following notification of modifications needed to complete the user story. In this case, the user story may be reassigned to another student.
  - Note: Each student may have an opportunity to revisit as many as three user stories. If the three revisits are used, all subsequent iteration reviews may not be revisited.
- Assignment:
  - 50% deduction if submitted one class period late.
  - 100% deduction (no credit) if submitted more than one class period late.

Course Grading Criteria:

The student's course score will be determined as follows:

- Iteration reviews, system contributions, deliverables 60%
- Participation in planning, review, and demo sessions 15%
- Progress reports and/or deliverable descriptions 10%

- Peer Evaluation 15%

Grading Scale:

- The course grade will be assigned based on the student's overall course score. The following grading scale will be used:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

- The instructor reserves the right to curve course averages upwards to fit this scale if appropriate, and if necessary.
- Grading Scale Note: Peer evaluations may influence each student's course grade; that is, the student's overall course evaluation may include deviations from the calculated grade from the grading elements listed above –**a letter grade or more**. The instructor reserves the right to adjust the peer evaluation ratings if they are not consistent with the periodic progress reports and/or the instructor's observations of the student's activities and contributions.

General Policies:

- Students are expected to attend class.
- Students are responsible for all material discussed in class.
- The instructor may remove a student from her/his team if she/he is not contributing to the team effort. In this case, the student must complete all course requirements alone.
- The class schedule, procedures for grading the course, and other details of the syllabus are subject to change in the event of extenuating circumstances.

Student Academic Rights and Responsibilities:

"Every student is expected to be thoroughly familiar with the University's Code of Student Rights and Responsibilities and Student Conduct, which can be found in the 'General Information' section of this catalog.

Every student is responsible for reading the academic policies in the Undergraduate Catalog and official announcements of the College of Business and for abiding by such regulations. Specifically, every student is responsible for knowing the grade point averages and program requirements needed for graduation. Students are encouraged to see a COB academic advisor to clarify any questions or concerns.

Along with preparing for and attending class, each student has the responsibility to promote high academic standards. Students are expected to cooperate in all classes with faculty members to achieve an optimal learning environment. Inappropriate classroom behavior may result in the student being withdrawn from the course, and potentially assigned academic penalties. Inappropriate classroom behavior will be dealt with in the same manner as academic dishonesty.

The COB will not tolerate academic dishonesty. The COB has a strong policy of academic discipline for action against students who commit academic dishonesty or conduct themselves inappropriately in the classroom. A proven case of academic dishonesty will normally result in the student being denied admission to or dismissed from the COB.

Academic dishonesty is defined by the Code of Student Conduct in the Undergraduate Catalog. Its definition pertains to but is not limited to cheating, fabrication, falsification, multiple submission, plagiarism, and complicity. It is the student's responsibility to maintain high standards of ethical conduct, and intellectual integrity and to be familiar with the definition of academic dishonesty.

As evidence of the seriousness with which the COB regards these matters, academic dishonesty allegations are handled in accordance with COB Procedures for Dealing with Academic Dishonesty."

University of Louisville Undergraduate Catalog, Summer 2010 – Spring 2011, http://louisville.edu/undergraduatecatalog/fall-2010-summer-2011-undergraduate-catalog/units/bu.html

ADA Policy Statement:

"The University of Louisville is committed to providing equal opportunity for persons with disabilities. This commitment includes complying with the Americans with Disabilities Act of 1990 (ADA) and Sections 504 and 508 of the Rehabilitation Act of 1973. In addition, all of the University's websites and online courses will comply with the web page design standards established by the World Wide Web Consortium (W3C). The University of Louisville strives to maintain a barrier-free, welcoming environment for everybody.

The ADA Coordinator, located in the Affirmative Action Office (502 852-6688), will monitor compliance and advise unit heads in meeting equal opportunity obligations. The Disability Resource Center staff (502 852-6938) will assist the University community by serving as an information resource center and coordinating support services for students with disabilities. No otherwise qualified individual with a disability shall, solely by reason of such disability, be excluded from participation in, be denied benefits of, or be subjected to discrimination in University programs. The President, Board of Trustees, Student Government, Faculty and Staff Senates affirm the University's long standing and continuing commitment to Equal Opportunity for persons with disabilities."

University of Louisville Undergraduate Catalog, Summer 2010 – Spring 2011, http://louisville.edu/undergraduatecatalog/fall-2010-summer-2011-undergraduate-catalog/about/ada.html

Last Day to Drop Course Without Academic Penalty: February 28, 2011

Computer Resources and Software:

- The software will be implemented for deployment on servers hosted by commercial IT vendors (or equivalent environments). A standardized development environment will be used. The software tools needed for systems development will be available in the CIS Computer Laboratory or through the Nonprofit Innovation Center.
- Visio should be used for analysis and design modeling. This software is available in the CIS Computer Laboratory.
- The University e-mail system may be used to communicate with fellow students.

Guidelines for Team Work:

- The whole is greater than the sum of its parts. A software team working together will develop a higher quality information system than if each member works individually.
- Each student has something of value to contribute. Each student has a responsibility to listen and to respond to what is suggested.
- Ideas are useful only when they are communicated and recorded. Take the effort to describe your idea in a written form that allows it to be communicated to others, as well as providing a permanent record of your considerations and decisions.
- Be willing to compromise. Rarely are solutions optimal, but they can be assessed in terms of completeness and consistency.
- Written specifications drive the coding. No software may be created without a requirement (i.e., user story) to do so and without a corresponding design guideline specifying its behavior.
- The nature of this course requires that students meet outside of class. Each student must be willing to find a meeting time that will accommodate her/his team members.
- Every student is expected to develop her/his technical skills. Accept tasks so that everyone has an opportunity to develop skills that will be valued in the work place.
- Use the e-mail systems to communicate with fellow students.

What You May Expect of the Instructor:

- Class sessions will be used for planning sessions, iteration reviews, discussions of information systems development issues, and reflective discussions of development progress.
- The instructor will provide the project management functions of monitoring, reviewing, and controlling. Although the instructor will not make technical decisions, he may guide you in making them.
- The instructor/team leads will guide the teams. Each student has a voice in all decision making activities.
- The instructor will ensure that the software is delivered.
- The instructor will help you in any way that he can!

What the Instructor Expects of the Student:

- Attend class.
- Attend all planning sessions and review sessions.
- Participate in team discussions and decision making activities.
- Contribute to the team effort.
- Complete the assignments on time.
- Develop your weaknesses.
- Request help:
  - Ask questions if you are not sure what you are supposed to do.
  - Make an appointment to see the instructor.
- Behave as an IS professional would!