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| **CIS 420 – CIS Development Project**  **420-** **01-4182** |
| **Spring 2018** |

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| **I. Professor / Instructor** | |
| **Instructor** | Dr. Sandeep Goyal |
| **Contact information** | Office: Room 301, College of Business  Telephone: (502) 852 4780  Fax: (502) 752-7557  Email: [Sandeep.Goyal@louisville.edu](mailto:Sandeep.Goyal@louisville.edu) |
| **Office hours** | Thursday: 12:30pm – 2:30pm;  and by appointment. |
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| **II. Course Information** | |
| **Class time / Room** | TTH 02:30pm-03:45pm  Business 003 |
| **Required text** | No required textbook for this class  **Recommended Text**  Schwalbe, K. Introduction to Project Management, Third Edition. |
| **Course description** | CIS 420 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 for a not-for-profit client from the Louisville Metro community. 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. A final production system will be chosen from the system prototypes produced by the student teams and is deployed in the clients organization by the completion of the course. |
| **Prerequisites** | CIS 310, CIS 320, and CIS 350 |
| **Learning objectives** | 1. Participate in planning of information systems development activities, and to monitor and to report progress with respect to plan expectations; 2. Apply iterative development techniques to design and to implement an information system; 3. Design an information system using object-oriented modeling techniques; 4. 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; 5. Implement an information system in accordance with design models and standard practices; 6. Apply systems technologies acquired in previous courses to the development of an information system; 7. Refine written and oral communication skills; 8. Take the initiative in developing a software solution and in contributing to/leading group activities: and 9. Gain practical experience in group decision-making and in functioning as a member of an information systems development team. |
| **Teaching / Learning**  **pedagogy** | 1. Class sessions will be used for planning sessions, iteration reviews, discussions of information systems development issues, and reflective discussions of development progress; 2. The instructor will provide the project management functions of monitoring, reviewing, and controlling. Although may also guide you in making technical decisions; 3. The instructor/team leads will guide the teams. Each student has a voice in all decision making activities; and 4. The instructor will ensure that the software is delivered. |
| **Final drop date** | See: <http://louisville.edu/calendars/academic/undergrad-grad.html> |
| Expectations of outside time required for class | To be successful you should allow 8 to 12 hours for reading, research and, study time each week. |

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| **III. Evaluation** | | | |
| **Grading scale** | A 93.0 – 100%  A- 90.0 - 92.9%  B+ 87.0 - 89.9%  B 83.0 - 86.9% | B- 80.0 - 82.9%  C+ 77.0 - 79.9%  C 73.0 - 76.9%  C- 70.0 - 72.9%  D+ 67.0 - 69.9% | D 63.0 - 66.9%  D- 60.0 - 62.9%  F 0.00 - 60.0%  **EF** (Earned Failure) or **UF** (Unearned Failure) |
| **Grading scheme** | The student's course score will be determined as follows:   |  |  | | --- | --- | | **Component** | **Points** | | Iteration reviews (2 X 150 points each) | 300 | | Team contact list (email) | 20 | | .Net exercises | 50 | | Project proposal | 30 | | Project evaluation | 150 | | Class attendance | 100 | | Final client presentation | 100 | | Completed project and deliverables | 200 | | Peer evaluations (5 X 6 points each) | 30 | | Unofficial transcript | 20 | | **Total** | **1000** | | | |

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| IV. Schedule(Please check blackboard for any updates) | | |
| Week | Date | Topic |
| 1 | 1/09 | Course plan and syllabusUnofficial transcript (20 Points)Setup Visual Studio |
| 1 | 1/11 | Team formation  Project planning - Email a list of project requirements  Team contact send an email with list of team members by end of the class (20 points) |
| 2 | 1/16 | Introduction to .NET  -.NET life cycle review  -.NET overview  -GitHub overview  -Review students' development environment configurations  -Start .NET intro |
| 2 | 1/18 | Finalize project requirements |
| 3 | 1/23 | .NET life cycle review  .NET overview  GitHub overview  Review students' development environment configurations  Start .NET intro |
| 3 | 1/25 | Work on project proposal – Email project proposal by the end of the class **(30 points)** |
| 4 | 1/30 | Finish .NET Intro  Review project requirements  Review using GitHub Project for tasking out the project |
| 4 | 2/1 | Work on project |
| 5 | 2/6 | Determine division of work  Create initial project and commit to GitHub  Have teammates pull down initial project and ensure it runs on their local development environment  Resolve any local development environment issues  Create all models  Create controllers for each model  Create necessary views for each model |
| 5 | 2/8 | Iteration review #1 (150 Points)  Upload peer evaluation 2 to blackboard by the beginning of the class **(6 points)** |
| 6 | 2/13 | Review proposed database schema  Create Data Models  Create Controllers for the Models  Create views for each model  Add static page content |
| 6 | 2/15 | Work on project |
| 7 | 2/20 | Update Controllers per the project requirements  Update/Customize views per the project requirements  Start setting up calendar |
| 7 | 2/22 | Work on project |
| 8 | 2/27 | Update CRUD functionality for models per the project requirements  Setup outsourcing payments to PayPal |
| 8 | 3/1 | Work on project |
| 9 | 3/6 | Iteration review #2 (150 Points)  Upload peer evaluation 3 to blackboard by the beginning of the class (6 Points) |
| 9 | 3/8 | Finish updating controllers  Finish updating views |
| 10 | 3/13 | **Spring Break** |
| 10 | 3/15 | **Spring Break** |
| 11 | 3/20 | Finish up remaining tasks |
| 11 | 3/22 | Project evaluations—see project evaluations description for detail (150 points) |
| 12 | 3/27 | Site Optimization  UI Updates  Testing  Bug Fixes |
| 12 | 3/29 | Project evaluations (continued) (150 points) |
| 13 | 4/3 | Site Optimization  UI Updates  Testing  Bug Fixes |
| 13 | 4/5 | Client Project Presentations (tentative) (100 points)Upload peer evaluation 4 to blackboard by the beginning of the class (6 points) |
| 14 | 4/10 | Catch up |
| 14 | 4/12 | Final project report and documentation |
| 15 | 4/17 | Site Optimization  UI Updates  Testing Bug Fixes |
| 15 | 4/19 | Final project report and documentation |
| 16 | 4/24 | Reading day |
|  |  | Complete project (200 points)Due 5:00pm on the day of the final exam.Upload peer evaluation 5 to blackboard by the beginning of the classFinal Exam Date: <http://louisville.edu/registrar/registration-information/final-exam-schedules> |

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| **V. Additional Work Details** | |
| **Peer evaluation** | 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.  Peer evaluations **WILL** 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**. For example, a 50% grade on peer evaluation means a 50% credit on the calculated grade on the concerned grading element. The instructor reserves the right to adjust the peer evaluation ratings if they are not consistent with the instructor’s observations of the student’s activities and contributions. Peer evaluations apply to the deliverable they are submitted with.  In extreme cases, where a group becomes dysfunctional for any reason, the instructor reserves the right to assign grades based on individual performance and re-assign team members.  Even though every deliverable has a peer evaluation associated with an intent that your peers would evaluate your contributions for that particular deliverable. It is likely that your peers might take into account your effort towards the overall project into account in evaluating you. Such a behavior would be consistent with a real world setting. |
| **Iteration Reviews** | Every team would select one team member to present their project to the client. This team member should be carefully selected because the team is selecting the team member for all three client presentations. Team would need special permission from the instructor if they would like to change the person presenting to the client.  Every iteration review is worth 150 points—100 points for the project and 50 points for the presentation. Both your client and instructor would assign you points (out of 150) for each iteration. The average of the client grade and the instructor grade would be considered as the iteration grade.  Your instructor would use your iteration review checklist in determining your grade for the iteration review project grade (100 points) and presentation clarity for the presentation grade (50 points). Often clients are not fair and unreasonable in assigning their grades. This is true for real world as well. Therefore, client assigned grades would not be changed under any circumstances. |
| **Project evaluations** | Every student in the class is required to participate in actual development of the project. Towards the latter part of the semester (see schedule for exact dates) your instructor would evaluate your individual contributions towards the project. For the project evaluations, you will meet one-on-one with your instructor and provide one sheet of paper with a list of three things that you have accomplished for the project. Here are some important considerations:   1. On a sheet of paper, list three bullet points outlining your individual contributions towards the project. Handwritten contributions are okay. You do not have to turn anything in. Just show it to me when we talk in-person. 2. You do not have to explain your contributions because we would meet one-on-one and you will have to show me your accomplishments in-person. Any explanations necessary must be saved for the meeting. 3. If you claim credit for a particular aspect of the project, no one else in your team can take credit for the same, even if you did collaborate with someone on it. I understand that you may have collaborated with your team members on everything you have done. If you have, you and your collaborator must decide as to what you can count on this evaluation and what your collaborator can. I would hope that you have worked on more than three things during the better part of the semester. This evaluation would not only allow me to evaluate your significant contributions to the project, but also (more importantly) your rapport with your team members because having a good rapport in a team is vital to your success in your first (real) job after your graduate. 4. The aspects of the project that you can claim credit for will not include anything that has no specific development outcome such as logistics, learning etc…… 5. You can (and should) list more than three contributions because what you may think is a contribution may not be a substantial contribution. If of all three, anything I evaluate as not being significant, or you list less than three, there will be a deduction of 50 points per deficiency. 6. There are two dates presented in the schedule for evaluation. As a group, please decide when you would like to be evaluated. Evaluation date choice would be on first come first serve basis. |
| **Course competition** | The entire class would be divided into two or more teams using a fantasy draft. These teams will develop competing solutions for the client. It is the responsibility of your instructor that consistent information is made available to all the teams. At the end of the semester, client is required to pick the winning team.  Winning team gets:   1. An opportunity to implement the system they have developed throughout the semester; and 2. A 300/300 on the final client presentations and “Completed project and deliverables.”   Winning team is responsible for successfully implementing the solution for the client. Grades of the winning team members (complete 300 points) are still susceptible to peer evaluations.  Non-winning teams are still required to deliver a completed project. Your client will assign a score out of 100 on your final client presentations and your instructor will carefully grade your project and assign a score out of 200 points for “Completed project and deliverables”  Only one single team will be selected by the client across both CIS 420 sections. |
| **Blackboard** | As with most classes, Blackboard will be used for providing multimedia content, handouts, study guides, readings, and other sources of materials. Blackboard will also be used for discussion boards as needed. I will post announcements, assignments, syllabus, schedules, and other communication on Blackboard; you are expected to check the site regularly for such communication! You will also be able to check your grade(s) via Blackboard. You are responsible for insuring that emails sent via Blackboard are being delivered to an email location that you regularly check. Failure to check and therefore receive email from me is NOT a valid excuse! |
| **Class participation and attendance** | Class participation refers to both contributing effectively to the project during class meetings as well as a professional decorum. If a teammate is being disrespectful, please inform your teacher. All such information would be kept confidential and may be referred to chair of the CIS department.  **Students should plan on attending “every” class without exception barring extraordinary circumstances.** Attending class and turning in all assignments is extremely important in this class. You must place education, attending classes, doing homework assignments, and learning at the top of your priority list if you are going to succeed in life and have a successful career.  ***EVERY MISSED CLASS WOULD RESULT IN A SIGNIFICANT LOSS OF CLASS PARTICIPATION AND ATTENDENCE POINTS.*** |
| **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. |
| **Changes in the syllabus** | The class schedule, procedures for grading the course, and other details of the syllabus are subject to change in the event of extenuating circumstances.  Instances where your instructor expects potential changes have been clearly marked with an asterisk (\*). Please look at the announcements posted on blackboard prior to coming to class for those class sessions. |
| **Late submissions** | All assigned tasks are expected to be submitted on their due dates. The following penalties will be levied against late submissions.   1. Iteration review/deliverable/peer evaluations: 2. 25% deduction if submitted one class period late and if less than the substantial progress is demonstrated on the due date. 3. 50% deduction if submitted between one and two class periods late. 4. 100% deduction (no credit) if submitted more than two class periods late. 5. Note: late penalties may be waived in extenuating circumstances if approved by the instructor. |
| **Guidelines for team work** | 1. 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 2. Each student has something of value to contribute. Each student has a responsibility to listen and to respond to what is suggested 3. 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 4. Be willing to compromise. Rarely are solutions optimal, but they can be assessed in terms of completeness and consistency 5. 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 6. 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 7. 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 8. Use the e-mail systems to communicate with fellow students |
| **What You May Expect of the Instructor** | 1. Class sessions will be used for planning sessions, iteration reviews, discussions of information systems development issues, and reflective discussions of development progress 2. 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 3. The instructor/team leads will guide the teams. Each student has a voice in all decision making activities 4. The instructor will ensure that the software is delivered |
| **What the Instructor Expects of the Student** | 1. Attend class 2. Attend all planning sessions and review sessions 3. Participate in team discussions and decision making activities 4. Contribute to the team effort 5. Complete the assignments on time 6. Develop your weaknesses 7. Request help: 8. Ask questions if you are not sure what you are supposed to do 9. Make an appointment to see the instructor 10. Behave as an IS professional would! |
| **Confidentiality and ownership** | You should maintain confidentiality of all work performed for any agency or organization. That means you should not discuss or share information about your work or the nature of your tasks with anyone outside the class structure. Work performed for an agency or organization remains the property of the agency or organization. Violation of the confidentiality may result in dismissal from the course. |
| **Disputes involving recorded grades** | Grading is, to a large extent, a subjective process. I strive to be consistent. If you have an issue with the score received on an assignment or test, you must send me an email within **one week** after the score has been posted on Blackboard. If you want to make a case for re-grading of work based on another student’s score on the same assignment or test, I will review and then re-grade your work, as well as the other student’s work, from scratch.  **You may NOT dispute any assignment or test score that has been posted in “My Grades” (on Blackboard) for more than a week.** |

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| **V1. Student Responsibilities / College and University Issues** | |
| **University of Louisville student**  **conduct and responsibilities** | This course will abide by University of Louisville student  conduct and responsibilities with regards to ethics and related issues:  <http://louisville.edu/dos/students/policies-procedures/student-handbook.html#codeofstudentconduct> |
| **College of Business student conduct and responsibilities** | This course will abide by College of Business student  conduct and responsibilities with regards to ethics and related issues:  <http://business.louisville.edu/students/college-of-business-academic-dishonesty-policy> |
| **Religious holiday conflict policy** | <http://louisville.edu/diversity/resources/work-restricted-holy-day-policies-calendar.html> |
| **University policy on equal access** | <http://louisville.edu/disability/policies-procedures> |
| **Severe weather** | In case of severe weather classes may be cancelled up to a certain time of day. Please check the U of L website or call the University Information Center (852-5555). You can sign up for UofL Alerts at <http://louisville.edu/alerts> if you wish to receive text messages regarding cancelled or delayed classes. |
| **Classroom policy** | 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. |
| **Title IX/Clery Act Notification** | Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies.  Students experiencing such behavior may obtain **confidential** supportfrom the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).  Disclosure to **University faculty or instructors** of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is **not confidential** under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University’s Title IX officer.  For more information, see the Sexual Misconduct Resource Guide  (<http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure>). |