CSC 4330 - Software System Development (a service-learning course), Fall-2011 17:10-20:00 M, 109 Coates Hall, LSU

INSTRUCTOR:	Dr. S. Kundu (kundu@csc.lsu.edu)	287 Coates, 8-2
GRADER:	Mr. Emran Chowdhury (mchowd3@tigers.lsu.edu)	??? Coates, ?-?

 2246
 Off. Hrs: 15:30-17:00 MW or by app

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 Off. Hrs: 12:00-13:30 TT or by app

COURSE DESCRIPTION:

This is a capstone Service-Learning software design project course. It will cover major techniques for life-cycle modeling, capturing and modeling software requirements, finite-state and other behavior modeling, and testing large scale software.

SERVICE LEARNING:

Service-learning is defined as "a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of the subject discipline, and an enhanced sense of civic responsibility" (Bringle & Hatcher, 1995).

COMMUNITY PARTNERS:

- Families Helping Families of GBR: 778 Chevelle Dr., BR, LA 70806, 225-216-7474, Jamie Tindle, jamietindle@fhfgbr.org, jamietindle@cox.net, www.fhfgbr.org
- Baton Rouge Bar Association (www.brba.org), P.O.Box 2241, Baton Rouge, LA 70821 225-214-5563, 225-344-4805 (fax), Ann Gregorie Scarle, Executive Director, ann@BRBA.org
- Bright Futures CIC, City of Donaldsville 225-717-2595, Dona Gaignard, djgaignard@yahoo.com
- 4. Campus Sustainability, LSU, sustainability.lsu.edu 578-2630, Denise Scribner, scribner@lsu.edu
- Rape Crisis Center, Office of the District Attorney, 19th J.D., 233 St. Ferdinand Street, Baton Rouge, LA 70802 225-389-3456 (work), (985) 855-2534 (c), Racheal Hebert, Coordinator, Outreach, Education, and Volunteer, rehebert@brrcc.or
- 6. P.R.E.A.C.H. (www.preachisliteracy.bravehost.com) 225-923-8000, Rev. Alexis Anderson, preachisliteracy@hotmail.com, Executive Director, EBRCOA (www.ebrcoa.org)
- Inner Wheel Baton Rouge
 225-751-4014, 225-964-0286 (c), Sheila Melancan, seilamela@cox.net. Board of Directors
- Odell S. Williams Now and Then Museum of African American History, 538 S. Boulevard, BR, LA 70802 225-343-4431, Sadie Roberts-Joseph, Founder and Executive Director: Sadie Roberts-Joseph
- 9. The Arc Iberville 225-687-4062, Michael Eby, Executive Director, michael_arci@bellsouth.net
- EBR Coucil of Aging,
 225-923-8000, Shontell LeBeauf, slebeouf@ebrcoa.org, Director of Resource Development and Capital Campaign.

EXAMS:	No make-up exams, except for emergency/sickness (proof required).		
	10% + 10% + 10%	Three quizzes (tentative: 19 Sep, 10 Oct, and 14 Nov)	
	5%	Homeworks (weekly)	
	30%	Project documentations and other reports (submission by parts, dates to be determined later)	
15%+15%		For each of Mid-semester and Final project presentation (Nov. 21 and 28). Each student	
		should be prepared to present any part of the project. Note: Total Project Score will be	
		weighted based on your peer-evaluation: If your project score is 40 out of 60 and your peer-	
		evaluation is 80%, then your project score is $40 \times 0.80 = 32$ out of 60.	
	5%	Participation in class discussions.	

GRADING: A = 85-100, B = 75-84, C = 65-74, F = 00-64 (no curving or class-averaging).

TEXT BOOK: • Class-notes and other reading material assigned from time to time.

ACADEMIC INTEGRITY, etc.:

High standards of academic integrity are expected; plagiarism/cheating on assignments/tests is not tolerated and will be reported to higher authority. Electronic devices (cell-phones, beepers, pagers) are to be turned off. The classroom use of computers is limited to course-related work only to avoid distraction to fellow students and interference with normal classroom activities.

SERVICE-LEARNING PROJECTS:

The projects will involve for the most part developing web-based information systems, including databases in some cases. The project requirements will be developed in consultation with the community-partner(s). You will be required to successfully complete and deliver the project to the satisfaction of the community-partner (and the instructor), who will also evaluate your project and assign marks. Expect 4 to 5 site visits (for consultations and demonstrations) to the community partner for the intermediate stages of the projects. Each visit may last upto 30 minutes to 1 hour, depending on the needs.

REFLECTION COMPONENT:

- Each student shall write a short "reflection essay" once every 3-weeks based on their experiences, including how they relate to the course objectives. (The instructor will provide guidelines for these essays based on the ORID model.)
- There will be in-class discussion based on these essays to allow students to share their experiences with other students (and the community partner, when possible).

COURSE OBJECTIVES:

- Learn how to formulate software projects in consultation with real customers to meet real-life specific needs.
- Learn how to create detailed and verifi able software requirements using domain analysis and how to document them in concise and precise manner using various (static and dynamic) modeling techniques.
- Learn how to analyse software design and how to develop test-plans for a software based on requirements and design; master different testing strategies.
- Learn software process models and role of software management.
- Demonstrate professional behavior in all interactions with the community partners.
- Learn working as a team and master communication skills (written and oral).

LEARNING OUTCOMES:

- Understand problems in software design and analysis.
- Understand techniques to solve these problems.
- Understand the gap between the technical aspects of software design and what it means to develop a software that meets a specific customer need, including the role of customer-interaction throughout the software life-cycle (from developing software requirements all the way to the successful delivery of the software).

CxC CERTIFIED COMMUNICATION-INTENSIVE (C-I) COURSE:

This is a certified Communication-Intensive (C-I) course which meets all of the requirements set forth by LSU?s Communication across the Curriculum program, including

- 1. Instruction and assignments emphasizing informal and formal [mode 1] and [mode 2];
- 2. Teaching of discipline-specific communication techniques;
- 3. Use of draft-feedback-revision process for learning;
- 4. Practice of ethical and professional work standards;
- 5. 40% of the course grade rooted in communication-based work; and
- 6. A student/faculty ratio no greater than 35:1