Texas State University
CS4379Y/5369Y - Green Computing

Semester: Fall 2017
Classroom: DERR235
Time: Tuesday & Thursday 3:30 pm – 4:50 pm
Website: http://cs.txstate.edu/~zz11/gc

Instructor: Dr. Ziliang Zong
Office: CMAL 301C
Phone: 512-245-8344
Email: zz11@txstate.edu
Office Hours: Tuesday & Thursday 1 pm – 3:30 am

Course Description:
Reducing the energy usage of computers, no matter they are hand held mobile devices, cloud computing platforms or power hungry supercomputers, is paramount today and will be a continuous challenge in the future. This course covers fundamental concepts and techniques in green computing. Topics include hardware energy efficiency, energy efficient software design, energy efficient resource management, green data center, energy efficient storage solutions and green mobile computing.

Selected Topics:
- Course Logistics and Introduction to Green Computing (1 Week)
- Green Computing: Challenges and Opportunities (1 Week)
- Green Data Center (2 Weeks)
- Hardware Energy Efficiency (2 Weeks)
- Power Measurement (1 Week)
- Software Energy Efficiency (4 Weeks)
- Energy-Efficient Resource Management (1 Week)
- Energy-Efficient Storage (1 Week)
- Green Mobile Computing (2 Weeks)

Prerequisites: C or higher in CS 3339: Computer Architecture
C or higher in CS 3358: Data Structures

Textbook: No textbooks. The instructor will use the state-of-the-art research papers in the field as the teaching material.

Course Evaluation:
Grades for this course will be based on:

1) Class Participation	5%
2) Paper Summaries (Homework)	25%
3) Paper Presentations and Leading Class Discussions	15%
3) Green Programming Competition	15%
4) Final Project	40%

and will be assigned as follows:

A	B	C	D	F
90 — 100	80 — 89	70 — 79	60 — 69	< 60

Attendance Policy:
Attendance is required for all class sessions.

Late Policy
No late assignments will be accepted.

Withdrawal Policy
Please follow the withdrawal and drop policy set up by the University and the College of Science. You are responsible for making sure that the drop process is complete.

Academic Integrity
Although you may exchange ideas with your classmates, you must complete assignments by yourself (or with members of your team, in the case of group projects). In particular, it is forbidden *under any circumstances whatsoever* to exchange assignments or source code with your classmates. **CLAIMING OTHER PEOPLE'S WORK (INCLUDING WORK PUBLICALLY AVAIABLE ONLINE) AS YOUR OWN IS A SERIOUS INFRINGEMENT UPON THE ACADEMIC INTEGRITY POLICY, AND WILL BE TREATED SERIOUSLY.** Please refer to the University's Academic Honor Code at http://www.txstate.edu/effective/upps/upps-07-10-01.html for more information.

ADA Compliance
Students with special needs or requiring special accommodations should contact the instructor during the first two weeks of classes. The student should also contact the office of disability services at the LBJ student center.

Other Requirements
I will contact you only using your official university email and please use your txstate email to contact your instructor as well. Your email may be automatically filtered or considered as junk email when you email your instructor using other email accounts.