CS 6303  Pervasive Computing

OVERVIEW: Pervasive computing is how computing will be used in the future. It aims to seamlessly integrate computing to our everyday activities, so that people do not need to care about computing artifacts. As said by Mark Weiser, “The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life until they are indistinguishable from it.” This course will introduce various techniques needed to realize pervasive computing.

Each student is required to present one or two recent research papers related to pervasive computing and complete one survey paper and one programming project in a team of maximum two members. The Instructor will introduce presentation skills and technical writing tips in class to help students successfully complete their assignments.

INSTRUCTOR:  Dr. Dan Lin
Office: CS 317
Email: lindan@mst.edu
Office Phone: (573) 341-4988

PREREQUISITES:  CS365, CpE319, or equivalent, or instructor’s permission required

GRADING:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Individual Homework</td>
<td>15%</td>
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<tr>
<td>Paper Presentation</td>
<td>20%</td>
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<tr>
<td>Programming Project</td>
<td>60%</td>
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<tr>
<td>Class Participation</td>
<td>5%</td>
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COURSE TOPICS:

- Overview of pervasive computing
- Analyzing data in pervasive environments using the MapReduce tool
- Human Computer Interaction (HCI) / Context-Aware Systems
- Tracking and Managing Spatial-Temporal (Moving) Objects
- Social Networks / Geo-Social Networks
- Vehicular Ad-hoc Networks (VANETs)
- Security and privacy issues in pervasive environments

COURSE POLICY:

- Course materials will be available online at Canvas
- Project is due by the beginning of this class on the due date. Late submission will be penalized 20% per day within 48 hours of the time it is due. No credit after that.
- Students are expected to attend all classes unless they have a reasonable excuse for being absent.
ACADEMIC DISHONESTY:
Students are strongly advised that any act of cheating will result in a score of 0 for the entire assignment and repeat offences will be reported to the Office, and may result in an automatic F grade. You are encouraged to discuss problems and ideas but the final solution must be your own. Page 30 of the S&T Student Academic Regulations handbook describes the student standard of conduct relative to the System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage. Additional guidance for faculty, including a description of the process for dealing with issues related to academic dishonesty, is available on-line at http://registrar.mst.edu/academicregs/index.html.

SPECIAL NEEDS:
If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation." More information is at http://counsel.mst.edu/

ACADEMIC ALERTS:
The purpose of the Academic Alert System (http://academicalert.mst.edu ) is to improve the overall academic success of students by improving communication among students, instructors and advisors; reducing the time required for students to be informed of their academic status; and informing students of actions necessary by them in order to meet the academic requirements in their courses. If at any time your performance falls below a C in this course, an academic alert may be issued by your instructor.

EMERGENCY EXIT FROM CLASSROOM:
http://registrar.mst.edu/documents/egress