FIT5046
Mobile and distributed computing systems

Unit Guide

Semester 1, 2011

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Last updated: 16 Mar 2011
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FIT5046 Mobile and distributed computing systems - Semester 1, 2011

Theoretical foundations of mobile computing systems, wireless networks, advanced mobile applications. Architectures of mobile distributed computing systems; wireless network classification and management; mobile distributed file systems; failure recovery, fault tolerance and reliability of mobile computing systems; replication in mobile distributed systems; case studies for distributed mobile database systems; mobile information systems; advanced mobile computing applications and the Internet; research trends; synchronisation and global time concepts; transaction management mechanisms for mobile computing.

Mode of Delivery

- Caulfield (Evening)
- South Africa (Day)

Contact Hours

2 hrs lectures/wk, 2 hrs laboratories/wk

Workload

Unit Relationships

Prohibitions

CSE5501

Prerequisites

Recommended background in Data Communications, Networking, Databases, Java Programming.

Chief Examiner

Shonali Krishnaswamy

Campus Lecturer

Caulfield

Prem Jayaraman

Tutors
Learning Objectives

At the completion of this unit students will:

- develop knowledge of the approaches and methods for building distributed and mobile computing systems;
- be familiar with the currently available models and approaches to building mobile and distributed computing systems;
- have developed practical skills in the use of these models and approaches, so that they will be able to select and apply the appropriate tools for a particular case;
- be aware of the current research directions in the field and their possible outcomes.

Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:
   a. engage in an internationalised world
   b. exhibit cross-cultural competence
   c. demonstrate ethical values

critical and creative scholars who:

   a. produce innovative solutions to problems
   b. apply research skills to a range of challenges
   c. communicate perceptively and effectively

Assessment Summary

Research paper and literature survey: 40%; Oral presentation: 10%; Practical work: 40%; Tutorial work/Group presentation: 10%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment 1</td>
<td>40%</td>
<td>Monday, 18 April, 2011</td>
</tr>
<tr>
<td>Presentation</td>
<td>10%</td>
<td>Weeks 8 - 10</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>40%</td>
<td>Demonstration - weeks 11-12</td>
</tr>
<tr>
<td>Regular Tutorial Work or Group Presentation</td>
<td>10%</td>
<td>In tutorials throughout semester</td>
</tr>
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</table>
Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

Feedback

Our feedback to You

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through SETU, Student Evaluation of Teacher and Unit. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, and on student evaluations, see:

Previous Student Evaluations of this unit

If you wish to view how previous students rated this unit, please go to https://emuapps.monash.edu.au/unitevaluations/index.jsp

Unit Schedule

<table>
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<tr>
<th>Week</th>
<th>Date*</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>21/02/11</td>
<td>No formal assessment or activities are undertaken in week 0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>28/02/11</td>
<td>Introduction to distributed and mobile computing. Architectural models for mobile &amp; distributed computing systems</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>07/03/11</td>
<td>Enabling wireless technologies and networks Part 1. Location management.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>14/03/11</td>
<td>Enabling wireless technologies and networks Part 2. Wireless LANs. IEEE 802.11</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>21/03/11</td>
<td>Enabling wireless technologies and networks Part 3. Bluetooth, WiMax, WAP, MIP, GPRS</td>
<td></td>
</tr>
</tbody>
</table>
Assessment Policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 50% then a mark of no greater than 49-N will be recorded for the unit.

Assessment Tasks

Participation

- Assessment task 1

  Title: Assignment 1

  Description: Research paper and literature survey

  Weighting: 40%

  Criteria for assessment: To be specified in Assignment specification

  Due date: Monday, 18 April, 2011
• Assessment task 2

Title: Presentation
Description: Presentation of the research paper
Weighting: 10%
Criteria for assessment: To be specified in Assignment specification
Due date: Weeks 8 - 10

• Assessment task 3

Title: Assignment 2
Description: Practical Assignment
Weighting: 40%
Criteria for assessment: To be specified in Assignment specification
Due date: Demonstration - weeks 11-12

• Assessment task 4

Title: Regular Tutorial Work or Group Presentation
Description:
Weighting: 10%
Criteria for assessment: To be specified in Assignment specification
Due date: In tutorials throughout semester

Examinations

Assignment submission

Assignment coversheets are available via "Student Forms" on the Faculty website:
http://www.infotech.monash.edu.au/resources/student/forms/
You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at: http://policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Plagiarism (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html)
- Special Consideration (http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html)
- Grading Scale (http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html)
- Discipline: Student Policy (http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html)
- Academic Calendar and Semesters (http://www.monash.edu.au/students/key-dates/)
- Orientation and Transition (http://www.infotech.monash.edu.au/resources/student/orientation/); and

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at www.monash.edu.au/students The Monash University Library provides a range of services and resources that enable you to save time and be more effective in your learning and research. Go to http://www.lib.monash.edu.au or the library tab in my.monash portal for more information. Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis

- Website: http://adm.monash.edu/sss/equity-diversity/disability-lliaison/index.html;
- Telephone: 03 9905 5704 to book an appointment with a DLO;
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus.