

## **SUBJECT DESCRIPTION FORM**

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Subject Title: Internet Computing and Applications

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Subject Code: COMP5322

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Credit Value: 3

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Pre-requisite: (Subject title and code no, if any)

Nil

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Recommended background knowledge:

Basic knowledge in programming and networking technology

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Mutual Exclusions:

Internet Computing (COMP515),  
Internet Computing For Managers (COMP5005),  
Underlying Technologies for E-Commerce (COMP5004)  
Enterprise Web and Internet Computing for Managers (COMP5321)

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Learning Approach:

42 hours of class activities including - lecture, tutorial, lab, workshop seminar where applicable

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Assessment:

Continuous Assessment	45%
Test, and Examination	55%

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Objectives:

- The subject studies the impact of Internet in facilitating a truly distributed, wide area and highly accessible computing environment.
- It explores various web-related technologies and to gain appreciative knowledge of how these technologies synergize with one another to enable ubiquitous access of information.
- This subject examines the analysis, design and implementation techniques required to develop the network, enterprise and Internet based information systems. In also covers the

managerial perspective of Internet Computing and how this evolving technology will impact future enterprise e-solution.

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#### Learning Outcomes:

After completing this subject, students should be able to:

1. gain a good overall understanding and appreciation of technologies encompassing Internet Computing that will equip them with the skill sets to plan, design and formulate best solutions for the deployment of state-of-the-art web-based information systems;
  2. critically assess the problems and issues surrounding the challenges presented to them. In the process of formulating a holistic solution to the problems, students are taught the skill sets to incrementally assess the suitability of various technologies; and
  3. understand the core concepts that underpin Internet Computing that will provide them with the necessary skill sets to acquire further knowledge as the technology continues to evolve.
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#### Keyword Syllabus:

##### **Internet Computing for Enterprise IS**

- Internet technology for enterprise IS
- Intranet vs Internet
- Network infrastructure and support for internet computing.
- Network security.

##### **Web-based Client/Server Computing**

- Revolution of Web as the intergalactic client/server internet computing platform. Web protocols and hypertext technology. HTTP data representation and response. Interactive Web-based client/server.
- Different technologies involved in Web programming and how they work together. Scripting with HTML, CGI programming and Java Servlet approaches to creating high-quality Web sites. Web security: SSL
- Web database connectivity and network interface

##### **Future of Web and Internet Computing**

- Next generation web standards: XML
  - General overview of XML and its application. XML Namespaces, Document type definitions, XSL.
  - Processing XML using DOM, SAX.
  - Developing enterprise XML-based web applications
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#### Indicative reading list and references:

Marty Hall, *Core Web Programming*, Prentice-Hall  
Balachander Krishnamurthy et. al., *Web Protocols and Practice*, Addison Wesley  
Robert Orfali et. al., *Client/Server Survival Guide*, 3rd Edition, Wiley  
Campione Walrath, *The Java Tutorial*, Addison Wesley

Alex Ceponkus et. *Applied XML*, Wiley  
Larry Wall et. *Programming in Perl*, O'Reilly  
Shishir Gundavaram, *CGI Programming on the World Wide Web*, O'Reilly

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*The Department reserves the right to update the syllabus contents. Please note that the learning approach for the same subject could vary slightly due to different delivery modes.*