Course Title: ‘IT655 –Information System Modelling’

Objectives
The course aims to introduce the principles of analysis and design to develop agricultural information systems.

Components
Concepts and notations of Object-Oriented and Unified Modeling Language (UML) approach are used to construct models. The topics include: types of information systems, data collection and recording methods, principles of object-oriented design, visual modeling and UML, identification of actors, use cases, activity diagram, identification of classes, relationships, behaviour and structure, inheritance, analyzing object behaviour, designing the system architecture, domain specific model to enable rapid implementation of new, industry-specific applications over diverse platforms, agricultural information systems: current situation and perspectives in India, development of ontology, and multi-lingual framework. The course discusses the use and interrelationship of various agricultural information systems, e.g. crop production, market information, food processing, and weather forecasting.

Outcome
The course will enable students to
- Learn concepts of information systems
- Learn basic principles of object-oriented and UML approach
- Understand phases involved in development of agricultural information system
- Develop of modules of agricultural information systems
- Understand the methodology for effective planning to implement agricultural information systems

Teaching Methodology
Weekly three hours of theory and two hours of lab work

Credit
3-0-2-4

Instructor
Gaurav Mishra and Sanjay Chaudhary
Web site: http://intranet.daiict.ac.in/~sanjay/

Course Content

<table>
<thead>
<tr>
<th>Sr No.</th>
<th>Topics</th>
<th>Hours</th>
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<tbody>
<tr>
<td>1</td>
<td>Concepts and Terms: data, information, uses of information a business organization, knowledge, sources of information, methods of data storage</td>
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<td>Sr No.</td>
<td>Topics</td>
<td>Hours</td>
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<td>3</td>
<td>Approaches to develop Information Systems: Use of Unified Modeling Language and Model Driven Architecture: Analysis, Design, and framework for implementation</td>
<td>20</td>
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<td>5</td>
<td>e-Agriculture in India: current situation and perspectives</td>
<td>4</td>
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<td>6</td>
<td>Databases and Ontology for Agriculture Science</td>
<td>4</td>
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<tr>
<td>7</td>
<td>Multi lingual framework to develop content in Indian languages</td>
<td>2</td>
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Total number of hours 40

Reference book

Evaluation Scheme

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<tr>
<th>Type of Examination</th>
<th>Weightage (%)</th>
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<tbody>
<tr>
<td>Mid-semester examination</td>
<td>20</td>
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<tr>
<td>Final theory examination</td>
<td>40</td>
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<tr>
<td>Project work</td>
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Contact Hours
Wednesday and Thursday: 16:00 – 17:00, room number 2109, faculty block – 2, DA-IICT

Web sites and Projects:
http://cedev.media.mit.edu/
http://cedev.media.mit.edu/SARI/mainsari.html
http://www.tutor2u.net/
http://informatics.nic.in/archive/inf2001apr/cover.htm
http://agrifor.ac.uk/text/browse/cabi/7f6b254d9ac32f27e6a748a66ebdb1b9.html
http://www.efita.net/
http://www.fao.org/docrep/007/ae539e/ae539e00.HTM
aAQUA,
Digital Ecosystem for Agriculture and Rural Livelihoods (DEAL),
Edugrid: http://www.edugrid.ac.in/webfolder/t/default.htm

http://disc.gsfc.nasa.gov/agriculture/ais_sum.shtml