

CSMC 818G

Information-Centric Design of Systems

Using Information Technology to Improve the Quality of Life

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What is this Course About

Improving the quality of life using information
technology

Participants

- UMD
 - 19 registered
 - ...
- Amrita University
 - AmritaPuri
 - Coimbatore
 - Bangalore
- Dayalbagh Educational Institute
 - 9 registered

Mode of Operation

- Independent and Group activities and research
- Cooperation and Interaction
- Exchange of ideas - Forum
- Groups of 2-3 people
- Assigned work for each week
- Every week
 - Lecture Session
 - Discussion Session
 - As required

Methodology

- Lectures
 - Focused presentation on a topic
 - Slides posted on the web
 - Annotate by adding your notes to catch the major points that may come up in discussions.
- Group Studies – Research and Exploration
 - Reports to be made in discussion session
 - Same rules of annotation apply
- Proof of Concept Demonstrations/Projects
 - Using Testbeds
 - MyeVyu
 - MAXWell Net
 - ...

Grading

- Based on
 - Class participation
 - Weekly activities
 - Papers/ Projects
 - Exams

Interactions

- In Class
- Through “Forum”
- Papers
- Web postings
- Individualized
- ...

Quality of Life

- What does it mean to you?

Perspective

- Individual
 - Family
 - Social Groups
 - Friends Circle
 - ...
- Organization
 - International - UN
 - Corporation
 - Government
 - Non-profit
 -

Areas

- Security
 - Public Safety – Individual
 - First Response – Incidence
 - Emergency Response – Catastrophic events
- Education
 - Elementary
 - School
 - College
 - Post Graduate and Research
- Health Care
 - Physician
 - Hospital
 - ER
 - Wellness care – health clubs – exercise
 - Food and Nutrition
- Recreation
- Social Interactions
- Transportation
- E-commerce
- Finance

Some Basic Notions

- Information
 - Fundamental Nature
 - Implications
- Interrelationships
- Context
- Models
- Limitations of Physical representations of information

Technological aspects

- Processing
- Storage
- Human Interaction
- Communications
- Inputs
 - Sensors
- Outputs
 - Actuations
 - Commands
 - Messages

When reading a paper

Standard paper questions:

- What is the claim of the paper?
- What is the key idea of the paper?
- What are the strengths and weaknesses of the paper?

Information-Centric questions:

- What is the purpose of the 'information' they are capturing?
- What 'information' are they capturing?
- How are they capturing the 'information'?
- How are they storing the 'information'?
- What 'contextual information' are they capturing?
- Is the 'information' being captured sufficient or useful for the purpose?
- What additional 'information' could or should be captured?