DA-IICT
Orientation Program
Post Graduate Students, 2012

by
Sanjay Chaudhary
Dean (Academic Programs)
Academics at DA-IICT

• It is a research-led institution
  – All the PG programs have a significant research and/or project component
  – The faculty have doctorate qualifications and most are actively involved in research
  – This research attitude is reflected in their teaching
• Well defined program structure
• Teaching methodology and way of expression
• PG students should be curious to explore and innovate
• PG students should develop ability to discover and improve based on academic environment, courses, experiments, projects, discussions, and self-learning
PhD Program

- Commenced during 2002
- Specific areas of PhD
  - Electronics, Communication Engineering, Computer Science / Information Technology, ICT, ICT in Agricultural and Rural Development, Humanities, Arts and Social Sciences, Medical Electronics, Bio-medical
- We conduct PhD selection process twice every year: June/July and December
- Out of 53 PhD students, seven have completed and three will complete this year
- Students of DA-IICT - BTech, MTech, MSc (ICTARD) and MDes students have joined PhD program at DA-IICT
PhD Program (cont.)

- We insist on course work to strengthen the foundation
- PhD Comprehensive Exam
  - After completion of course credits
  - To evaluate preparedness of a candidate for research aptitude as well as overall knowledge in the area and not only a very specific research topic
  - Many PhD students are not found good in other related areas and face issues while working in academic and research organizations
- Research Progress Seminars
- Financial Assistance for full time PhD students
  - Rs. 15,000 to Rs. 25,000 per month
- TCS Research Fellowship
- Residential PhD helps to generate quality research work and publication.
  - Advisable to spend at least first three years as a full time residential PhD student
- We offer Teaching Assistantship to the students of PhD and MTech programs
# Profile of PhD students

<table>
<thead>
<tr>
<th>Name</th>
<th>Area of PhD</th>
<th>Working at</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zakir Laliwala</td>
<td>Service Oriented Computing</td>
<td>IBM and his own company</td>
</tr>
<tr>
<td>Vikram Sorathia</td>
<td>Distributed Computing</td>
<td>Post doc: Twente University and University of Southern California</td>
</tr>
<tr>
<td>Uttam Bombale</td>
<td>Radio Frequency</td>
<td>Principal, Engg. College, MH</td>
</tr>
<tr>
<td>Dilip Kumar G.</td>
<td>ICTARD</td>
<td>Head, Knowledge Management Group, ICRISAT, AP</td>
</tr>
<tr>
<td>Sunil Jardosh</td>
<td>Sensor Networks</td>
<td>Asst. Prof., Shiv Nadar University</td>
</tr>
<tr>
<td>Ratnik Gandhi</td>
<td>Mathematics and TCS</td>
<td>Post doc, TIFR, Mumbai</td>
</tr>
</tbody>
</table>
M.Tech. (ICT)

- Prepare students for specialized research and academic positions
- Course curriculum was revised in the year 2008
- Four specializations
  - Communication Systems
  - Computer Networks
  - Machine Intelligence
  - VLSI and Embedded Systems
- Possibility to migrate to PhD after first year
- MTech Thesis
  - One year research based thesis
  - Three rounds of formal evaluation
Teaching Assistantship

• Initially offered to MTech and PhD students

• Opportunity to study as well as work:
  • To be treated as a valuable learning experience
  • Gain knowledge

• Nature of Duties
  – Assist in laboratory sessions or tutorial sessions
  – Correct assignments/submissions, etc
  – Take attendance

• Duties: maximum 20 hours per week
  – Of which - Contact hours – 3 to 6 per week

• Continuation dependent on satisfactory performance
  – Academic: (min. CPI 6.5/10 for full, 6.0/10 for half)
  – TA Duties
M. Des. (Communication Design)

• To prepare design professionals:
  – Content and
  – Technology
• Revised curriculum is implemented from August 2009
• Courses / Dimensions
  – Writing and Presentation
  – Approaches to culture and communication
  – Fundamentals of design
  – Interaction design
  – Animation
  – Games, Simulation and Modeling
  – Thematic Seminars, Research Applications
  – Ethnography and Applications
  – Introduction to Narratology
  – Web Design
  – Summer Internship
  – One semester full time project work with formal monitoring
M.Sc. (IT)

• To develop software/IT professionals for industry
• Curriculum was revised in the year 2006
• Current curriculum revision under progress
• Courses / Dimensions
  – Computer Programming: Database programming, Web, Data Mining, Information Security
  – Algorithms and Data Structures
  – Computer Organization, Computer Network
  – Software Engineering, Object-Oriented Analysis & Design
  – Mathematics
  – Network Economics, Principles of Management
  – Summer Internship
  – One semester full time project work with formal monitoring
M.Sc.
(ICT in Agriculture & Rural Development)

• To prepare graduates who will use ICT as means for developing innovative solutions to meet the challenges
• ICT as an interface for ARD
• Curriculum was revised in the year 2007 and 2009
• Courses / Dimensions
  – Development Theory and Practices, Rural Finance
  – Computer Basics, Databases, ICT Infrastructure: Implementation
  – Modeling and Simulation: Info System & Bio-Economic System
  – Quantitative Analysis, RS and GIS, Research Methodology
  – System Theory, MIS, Production & Operation Management
  – Electives: eGoverance, Precision Farming, Systems and Policy
  – Summer Internship
  – One semester full time project work with formal monitoring
Institutional Collaboration

- **Network of Engineering Institutions (NEI)**
  - It is a cooperative endeavor, initiated in January 2011 to promote the quality of PhD research
  - To provide quality courses through workshops conducted and evaluated by experts

- **MoUs:**
  - DA-IICT and IIT Gandhinagar
  - Space Applications Center: Sponsored PhD students,
  - ISEP (FR), WSU (USA), Uni of Regina, ICRISAT…

- **Tata Consultancy Service (TCS):** PhD fellowships

- **Ericsson India:** High-end industrial training
PG Programs of DA-IICT

- It is a credit-based system
- Students have to register for the courses they wish to take every semester
- Electives: Flexibility across the programs
<table>
<thead>
<tr>
<th>Course</th>
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<th>T</th>
<th>P</th>
<th>C</th>
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<tbody>
<tr>
<td>CT501 System and Signal Theory</td>
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<td>0</td>
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<td>EL521 VLSI Design Lab</td>
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<td>4</td>
<td>2</td>
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<tr>
<td>HM654 Development Theory and Practices</td>
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<td>0</td>
<td>3</td>
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<tr>
<td>IT522 Pattern Recognition</td>
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<td>3</td>
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<tr>
<td>PC612 Communication Skills*</td>
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<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>SC611 Mathematics</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
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# Grading System

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Corresponding Points</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>AB</td>
<td>9</td>
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</tr>
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<tr>
<td>DD</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>DE</td>
<td>3</td>
<td>Pass</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
<td>Fail</td>
</tr>
<tr>
<td>I</td>
<td>-</td>
<td>Incomplete</td>
</tr>
<tr>
<td>P</td>
<td>-</td>
<td>Passed</td>
</tr>
</tbody>
</table>
Continuous Evaluation
Grade for a Course can be based on any of the following:

- Lecture Attendance
- Tutorial Attendance and/or Submissions
- Quizzes (Informed or Surprise)
- H/W Assignments
- Laboratory Attendance and/or Submissions
- Viva and/or Presentations
- Projects
- Classroom Participation
- In-sem Examinations (one or two)
- End-sem Examination

• Choice and Weightage is the instructor’s prerogative
Graduation Requirements

• Graduation: has to pass all the courses as specified in the program curriculum and also achieve a minimum CPI:

\[
\text{CPI/SPI} = \frac{\sum c_i p_i}{\sum c_i} = \frac{\text{(grade points)}}{\text{(credits)}}
\]

• If a student’s CPI falls below the minimum requirement, he/she will be placed on probation and the PGC will specify the course load and stipulate the minimum SPI the student has to achieve.

• Persistent failure to achieve the minimum standards may result in the PGC recommending termination of admission.
Plagiarism

• Plagiarism is committed when you present someone else's ideas - published or unpublished - as if they were your own. People's ideas may be contained in written text (like articles, books, dissertations, theses, newspapers, magazines, notes, course material, co-students' projects, e-mail messages, data, computer code, everything on the Internet, etc), visual text (like books, fine art, graphics, photographs, etc.), multimedia products (like websites, video productions, films, CDs, design projects, etc.), music (compositions, lyrics, CDs, music or sound bites on the Internet, etc.) and spoken text (speeches, audio recordings, lectures, interviews, etc).

• Plagiarism is a serious offence.

• If you are found to have committed plagiarism in any of your submitted work (assignment, presentation, project report, thesis, etc), serious action will be initiated against you. The minimum penalty would be 0 (zero) marks for the component under review, which may lead to an “F” grade for the entire course.
Suggestions

- Attend each lecture, tutorial and lab session regularly. Be regular.
- Build strong fundamentals and develop interesting applications.
- Feel free to contact and discuss with Faculty members. Check for office contact hours of faculty members.
- Pay attention to all the courses and not only few courses.
- Do not blindly follow advice from someone / seniors.
- Observe your academic performance: SPI, CPI, Grade points.
- Define a proper study plan.
- Do not waste your time: computer games and gossip.
- Use resources effectively: labs, resource center, invited special lectures, student activities, IEEE student branch, events.
Best wishes for your study and life at DA-IICT