AGENDA

Fifteenth (15th) Meeting of SENATE of

Indraprastha Institute of Information Technology, Delhi

Date: 20th May 2011

Day: Friday

Time: 11.30 AM

Venue: Conference Room
3rd Floor, Library Building
NSIT Campus,
Sector-3, Dwarka,
New Delhi-110078

FIFTEENTH (15TH) MEETING OF SENATE OF IIIT-DELHI

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15.0 Opening remarks of Chairman

15.1 Confirmation of minutes of the 14th Senate meeting

The minutes of 14th Senate meeting was circulated among the members, which may be considered for confirmation. A copy of the same is placed at **(Annexure 1)**

15.2 Additional names for selection committee panel

The following names may be added to the panel: Dr. Ravi Kothari, Associate Director, IBM, and Tapan Parikh, Assistant Professor, Ischool, UC Berkeley.

15.3 M.Tech. in Data Engineering

It is proposed to start an MTech program in CS with specialization in Data Engineering. The general framework for this has already been approved earlier. Further details about this specialization are provided in **Annexure 2**.

15.4 To address direct interaction by parents of students with the instructors, the following rule has been made

No relative of a student, including parents, may approach any course instructor directly for a matter relating to student's academic performance in a course, or any action taken by the instructor with respect to academics and maintenance of academic standards and integrity. If the parents/family members feel that they need to discuss their ward's academic performance, or discuss any action taken by the Instructor to maintain standards/integrity, they should do so by sending a written letter to Assistant Manager, Academics, or fix a meeting with the instructor and faculty in-charge of academic affairs through their ward. Direct contacts with course instructors may be treated by the Institute as an attempt to influence/harass the faculty member.

15.5 Conversion from MTech to PhD

The students who are accepted for migration from MTech to PhD may be treated as having joined PhD directly after BTech for the purposes of course

requirements. Their status may be changed from MTech to Phd after the course requirements for MTech are completed. This is allowed in our PG Manual.

15.6 BTech (IT) Program – clarification of the graduation requirements for initial batches.

Credit requirements for graduation for 2008, 2009, and 2010 batches: When the BTech(IT) program was introduced in 2008, the credit requirements was 144 credits. In 2010, a minor revision and rationalization was done, The main changes were: Graduation requirements enhanced to 152 credits (8 more); system management, critical reading, and technical communication were made full 4 credit courses (and the 2 credit course in 4th year on interview skills was removed), and an additional Maths course (4 unit) was added in the second year. While the credit requirements would be applicable for 2010 batch onwards, some of the changes affected the earlier batches also. Specifically:

- 2008 Batch did the full 4-credit course on Technical Communications (though it was earlier envisaged as a 2-credit course); however it will not have to do the 2-credit follow up course on interview skills – so it balances out.
- 2009 Batch, when it came to 2nd year in 2010, did a 4-credit Critical Reading course, instead of the earlier 2-credit course. So, it will end up doing 2-credits extra. 2009 batch also did the extra Maths course, but it did it as an Engineering course, so it did not add any extra credits

It is proposed that for 2008 Batch the credit requirements for graduation remain at 144, but for 2009 Batch they be increased to 146, so as to accommodate the extra 2 credits in the Critical Reading course.

15.7 Rolling Phd Admission

Many IITs have gone for rolling selection and advertisement for PhD. It is proposed that IIIT-Delhi also adopt this practice. While some focused selections will be held at defined times like April/May of a year, admission to PhD program will be open throughout the year. For selection through the year, the PG Committee, or its appointed subcommittee, will take, from time to time, the decision regarding selection of a particular applicant into the PhD program.

15.8 CW Category for admission in the BTech (IT) program

Last year, due to some oversight, for admissions in the CW (children of War Widows) category, a few new categories got added, including wards of ex-servicemen and wards of current servicemen. It is felt that these categories

provide a backdoor entry for some, and it is proposed that IIIT-Delhi revert back to the categories it had in earlier years, namely:

1. Widows/wards of Defense Personnel killed in action.
2. Wards of serving personnel and ex-servicemen disabled in action.
3. Widows/wards of Defense Personnel who died in peace time with death attributable to Military Service.
4. Wards of Defense Personnel disabled in peace time with disability attributable to Military Service.

15.9 Status of those repeating the first year, and those who need to repeat the first year or leave the program

The current status of these students is given in **Annexure 3**.

15.10 Changes to existing regulations

i. In MTech (CS) regulations, the following should be added in section 3 (regarding requirements for specialization): "For specialization in an area, there may also be specific course requirements which will be specified separately for each area."

ii. **Introduction of Audit and Withdrawal grade.** The UG and PG regulations allow a student to withdraw from (one, for UG; some for PG) courses till some deadline (generally after the mid-sem). This is different from add/drop. It is proposed that for such courses, a withdrawal grade be given in the transcript. The option is that this course is treated is "dropped" and is not mentioned in the transcript at all.

iii. In regulations for BTech program, the following clarification is being added about graduation requirements: ""These are the general requirements for a BTech program - different BTech programs may specify additional requirements or restrictions, which shall be specified in regulations for that program, and which will have to be satisfied for completing the requirements for that program."

iv. The minimum/max credits for BTP be changed to 8/16 (from the current 12/16), with normally no more than 8 credits in a semester. This will allow 4+4 also as a possibility.

15.11 Any other Item with the permission of Chair

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Annexure 1

Minutes of the 14th Senate Meeting of IIIT-D held on 31st December 2010, at 11.30 AM in Conference Room, Library Building, IIIT Delhi

Following members were present:

- Prof. Pankaj Jalote - Chairman
- Dr. K. K. Biswas - Member (from IITD)
- Mr. C. Anantaram - Member (from TCS)
- Dr. Mayank Vatsa - Member
- Dr. Richa Singh - Member
- Dr. Astrid Kiehn - Member
- Dr. Vikram Goyal - Member
- Dr. Somitra Sanadhya - Member
- Dr. Amarjeet Singh - Member
- Dr. Ashish Sureka - Member
- Dr. Anirban Mondal - Member
- Dr. Ponnurangam Kumaraguru - Member

14.0 Chairman's opening remarks

The Chairman extended a warm welcome to all the members to the meeting. The members who could not attend the meeting were granted leave of absence.

14.1 Confirmation of minutes of the 13th meeting of Senate

As there were no comments from anyone, the minutes were confirmed.

14.2 Termination of repeat UG students who did not satisfy the conditions

Out of four repeat UG students who did not satisfy the criteria for continuing in the program, program of two students (Shenali and Rupali) shall be terminated from the programme. Adequate warnings and communications has been issued to them.

14.3 Recommendation on appeals of UG students for repeating or continuing

Two of the four students i.e. Manish Sagar and Abhishek have appealed to permit them to continue for another semester. The appeals committee had looked at their appeal and recommended to the senate agreed to allow them to continue with a condition that this shall be their last warning and they should have an alternative plan in place for the situation that they are not allowed to continue after next semester.

14.4 Panel of names for Selection Committee meeting in US

For faculty selections, there need to be 3 Experts (and 1 Chairman's nominee) in the selection committee. The panel for these experts has to be suggested by the Senate. For the recruitment in US during Feb end- March 2011, the Senate agreed that Experts may be taken from the Universities being visited and other comparable universities, if needed. The Senate also agreed that all Associate and Full Professors in CS/EE/other relevant departments in these Universities may be considered as part of the panel (and so the Chairman can select any three from them.)

14.5 MTech in Data Management and Analytics

The Senate approved the proposal in principle, and recommended that details be carefully worked out by the concerned group, and inputs should be taken from relevant industry segments to align the program to their needs.

14.6 Recommendation on removal of warning for some students

The recommendations of the appeals committee (headed by Dr. Astrid) about removing the warnings of Kanika Narang, Mohit Rathi, Gaurav Saluja was accepted. It was suggested that in future the warnings should have specific durations for which they are valid.

14.7 Recommendation on appeal of students to be allowed to register for courses for which they don't have the prerequisites

The senate decided to allow all such appeals. It was suggested that specific guideline be made for such appeals after 1st semester, so they can be automatically taken care of by the appeals committee.

14.8 Completion of term of external members and suggestions for inviting new members

As the term of external members (which is two years from Jan) had finished, the Senate put on record its appreciation for the services rendered by these members. Suggestions for new members were made, and Chairman Senate was requested to invite them.

14.9 Any Other matter

- Some students (Shrey Jairath, Gaurav Goswami, Ishita Jain and Saurav Maitra) who have less CGPA have requested for overload. The senate decided to leave this decision to the academic appeals committee.

- Abhishek Singh (2008003), a UG repeater student is under treatment at NIMHANS and has requested for a semester leave on Medical grounds. The Senate agreed to the appeals committee recommendation to allow the leave.

The meeting ended with a vote of thanks.

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Annexure 2:

MTech program in CS with specialization in Data Engineering

Background

The availability of massive amounts of data coupled with increasing demand for scalable and effective methods for their analysis has resulted in a critical need for experts in data engineering. The field of data engineering is based on the realization that mastering the data deluge requires not only an expertise in many aspects of computer science, but also a deep understanding of the nature of data itself. Data engineering plays a crucial role in several key areas such as geographic information systems, healthcare, data-driven sciences, bio-informatics, business and finance. While there is a growing demand for experts who can effectively tackle the challenges in data engineering, there is a serious lack of them. To address the increasing industry demand for highly-trained data engineering professionals, the Indraprastha Institute of Information Technology (IIIT Delhi) is proposing to offer an MTech program in Computer Science (CS) with specialization in Data Engineering.

The program is **industry-focused** with an objective to develop manpower for **high-end careers in data engineering** in the industry. This will be achieved by an approach involving rigorous and comprehensive academic course work covering theory, fundamentals and hands-on experience with real-world applications.

Structure of the program:

As per the MTech(CS) regulations, students are required to complete a total of 48 credits. Students can opt for either the thesis option or the non-thesis option. For the Data Engineering program, for satisfying the course requirements, a student has to do five core courses – these will fulfill the minimum credit requirement in the area for specialization. A student may do further courses as electives.

Core courses (5 core courses@4 credits each = 20 credits):

- ***Database system implementation*:** database models and languages, data representation, indexing, multi-dimensional data, query processing, transactions and concurrency control
- ***Data Mining:*** association rule mining, classification, clustering, text mining, data pre-processing, data transformations, mining data streams, mining the WWW
- ***Data Warehousing:*** dimensional data models, Star schema, Snowflake schema, data integrity, OLAP, ETL, data marts, warehouse management and data modeling
- ***Information Retrieval:*** Boolean retrieval, term vocabulary & postings lists, index construction & compression, scoring, term weighting & vector space model, text classification & naive Bayes, Web search basics, link analysis
- ***Design and Analysis of Algorithms (or its equivalent):*** greedy algorithms, dynamic programming, divide and conquer as part of tree and graph algorithms & NP-complete

Some Sample Electives (each elective is 4 credits):

- ***Distributed Databases:*** principles of distributed database design including architecture, design, integrity control, query processing, transactions & concurrency control
- ***Statistics:*** sampling, statistical inference, hypothesis testing, data exploration, parameter estimation, correlation, regression analysis & predictive analytics
- ***Machine Learning:*** supervised learning (neural networks, support vector machines), unsupervised learning (clustering, dimensionality reduction, kernel methods), reinforcement learning & statistical pattern recognition
- ***Massive Data Analytics and Visualization:*** parallel processing technologies (e.g., map-reduce, hadoop) for handling very large datasets, large-scale data exploration & visualization to extract interesting trends and patterns, random sampling & data streams
- ***Information Integration:*** data cleaning, data integration from disparate sources, XML, view integration, high-performance query execution systems based on dataflow, constraint-based integration
- ***Advanced topics in Data Management:*** case studies, seminars, research paper reading & some current research trends in the area of databases like XML databases, Object oriented databases, workflow systems, Active databases, Online databases, main memory databases etc
- ***Database methods in Information Retrieval:*** development of high-performance information retrieval systems, ranking in databases & top-k algorithms, keyword search in databases, knowledge-harvesting applications, searching the deep-web

Overall, the requirements for this program is summarized in this table:

	Core courses	Thesis/Scholarly paper	Electives	Total credits
Thesis option	20 credits	16 credits	12 credits	48 credits
Non-thesis option	20 credits	8 credits	20 credits	48 credits

Annexure 3:

Performance of students who joined 2009 but were repeating the I year

Performance of the repeaters is given below. This includes those students of the Btech2009 batch that had been asked, as per the regulations, to leave after the first year – but have been exempted from it after they appealed, namely Aditya Kumar, Abhishek Meena, Manish Sagar, Rupali Paul, and Shenali.

Aditya Kumar (2009056) (repeater)

Monsoon Semester 2010 Courses	**Grade**		**Winter Semester 2011 Courses**	**Grade**
Digital Circuits	D		Computer Organisation	D
Introduction to Programming	D		Data Structures & Algorithms	F
Discrete Mathematics	D		Linear Algebra & Advanced Calculus	F
System Management	C		Theory of Computation	F

No conflict with rules & will continue. Is aware of that 3 backlog course may require an extra semester. Explains his performance in the second semester with illness (was on medical leave).

Manish Sagar (2009024) (repeater)

Monsoon Semester 2010 Courses	**Grade**		**Winter Semester 2011 Courses**	**Grade**
Digital Circuits	F		Computer Organisation	B-
Introduction to Programming	B-		Data Structures & Algorithms	C-
Discrete Mathematics	F		Linear Algebra & Advanced Calculus	F
System Management	C-		Theory of Computation	F

Had indicated on phone, Monday, 16. May, that he will leave the Institute to pursue some thing else.

Abhishek Meena, Rupali Paul, Shenali – who were repeating the first year left IIIT-D after the first semester of this academic year.

All other repeaters did well or very well. SGPAs in the two repeat semesters for these students are:

Digvijay Singh: 7 + 9.6
Aditya Gulati: 7.5 + 7.6,
Sumit Aggarwal: 6.75 + 6 .6
Aarti Chand: 6.5 + 6.5.

Students of 2010 batch with critical performance.

Manisha Gautam (2010045)

Monsoon Semester 2010 Courses	Grade		Winter Semester 2011 Courses	Grade
Digital Circuits	F		Computer Organisation	F
Introduction to Programming	C-		Data Structures & Algorithms	F
Discrete Mathematics	F		Linear Algebra & Advanced Calculus	F
System Management	C		Theory of Computation	F

Will leave IIIT-D & join DU.
Discussion on Thursday, 12.05.11, with her and her mother.

Monika (2010051)

Monsoon Semester 2010 Courses	Grade		Winter Semester 2011 Courses	Grade
Digital Circuits	F		Computer Organisation	F
Introduction to Programming	D		Data Structures & Algorithms	F
Discrete Mathematics	F		Linear Algebra & Advanced Calculus	D
System Management	F		Theory of Computation	F

Will come on Wednesday, 18.05.11, with her parents.

Saurabh (2010076)

Monsoon Semester 2010 Courses	Grade		Winter Semester 2011 Courses	Grade
Digital Circuits	F		Computer Organisation	F
Introduction to Programming	F		Data Structures & Algorithms	F
Discrete Mathematics	F		Linear Algebra & Advanced Calculus	F
System Management	D		Theory of Computation	F

Said he would leave IIIT-D during the discussion on Thursday, 12.05.11.
Confirmed in writing that his parents were aware of the situation.
Emailed a request to repeat the year on Monday, 16.05.11.

Harshit Shukla (2010029)

Monsoon Semester 2010 Courses	Grade		Winter Semester 2011 Courses	Grade
Digital Circuits	D		Computer Organisation	F
Introduction to Programming	B		Data Structures & Algorithms	D
Discrete Mathematics	B		Linear Algebra & Advanced Calculus	F
System Management	B-		Theory of Computation	F

Said he would repeat the year during the discussion on Thursday, 12.05.11.
Confirmed in writing that his parents were aware of the situation.

Samiran Roy (2010073)

Monsoon Semester 2010 Courses	Grade		Winter Semester 2011 Courses	Grade
Digital Circuits	F		Computer Organisation	F
Introduction to Programming	D		Data Structures & Algorithms	D
Discrete Mathematics	F		Linear Algebra & Advanced Calculus	F
System Management	C-		Theory of Computation	B-

Said he would repeat the year during the discussion on Thursday, 12.05.11 (had come with his mother).

Sanya Singh (2010075)

Monsoon Semester 2010 Courses	Grade		Winter Semester 2011 Courses	Grade
Digital Circuits	F		Computer Organisation	D
Introduction to Programming	F		Data Structures & Algorithms	D
Discrete Mathematics	F		Linear Algebra & Advanced Calculus	C-
System Management	C-		Theory of Computation	F

Submitted a request to be promoted to the second year on Thursday, 12.05.11.
She and her father had an earlier discussion with the director on the subject.