12th MEETING OF

SENATE

AGENDA

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

DUE DATE OF MEETING: 19th JANUARY, 2009

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

Agenda	:	12th Meeting of the Senate
Venue	:	Senate Hall, NIT, Kurukshetra
Date & Time	:	19. 01. 2009 at 11. 00 a.m.

12.10	To consider the format of degree to be awarded to the MBA students in the 6th Convocation of the Institute to be held on 28th January, 2009.	195-196
12.11	To consider reconstitution of Standing Committee on Senate Affairs	197-198
12.12	To consider and approve revised scheme of MBA Degree Programme	199-218
12.13	To consider and approve changes proposed in the scheme of B.Tech Computer Engineering and Information Technology	219-221
12.14	To consider the reports of two Workshops on examination reforms & rationalization of B.Tech. Scheme held on 19.12.2008 & 10.01.2009 respectively.	222-225
12.15	To consider and approve modified scheme and syllabi of B.Tech. IEM 7th & 8th Semesters	226
12.16	To consider the request of Chairman Electronics & Comm. Engg. Department to review Clause R-7.4.1 of Ph.D Ordinance & regulations	227-229
12.17	To consider the request of old B.Tech students for granting mercy chance for appearing in their remaining papers	230-236
12.18	Any other item with the permission of the chair	

Item 12.1   To confirm the minutes of the 11th meeting of the Senate held on 08.02.2008 and to discuss the comments of Dr. S.K Madan, Professor in Civil Engineering Department on Item No. 11.8(ii)

The minutes of the 11th meeting of the Senate held on 08.02.2008 were circulated to all the members. The minutes are enclosed as Appendix 12.1 from page 2 to 9. However, Dr. S.K Madan, Professor, Civil Engg. Department vide letter No. C/413 dated 7.3.2008 sent his comments in response to minutes recorded under item 11.8(ii) regarding the basis for change of branch after the completion of B.Tech First Year. His comments are as under:

"I would like to bring to notice that no decision was taken to suggest an alternative mode. To mention further, at present, in IITs and other NITs, change of branch is permitted strictly in the order of merit as determined by their CGPA at the end of first year of B.Tech Programme."

The Senate may discuss and decide the above issue.

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136 119

Minutes of the 11th meeting of the Senate, National Institute of Technology,
Kurukshetra held on Friday, 8th February, 2008 at 4.00 PM in the Senate Hall,
NIT, Kurukshetra

The following were present

1.	Dr. M.N.Bandyopadhyay Director NIT, Kurukshetra	Chairman
2.	Shri S.P. Mahi 30/Type V Railway Enclave San Martin Marg Chankya Puri, New Delhi-21	Member
3.	Dr. R K Bansal Professor, Civil Engineering Department & Dean(Academic) NIT, Kurukshetra	Member
4.	Dr. T K Garg Professor, Mech. Engg.Deptt. NIT, Kurukshetra	Member
5.	Dr. S P Jain Professor Electrical Engineering Department & Dean (P&D) NIT, Kurukshetra	Member
6.	Dr. V K Arora Professor, Civil Engineering Department & PTSW NIT, Kurukshetra	Member
7.	Dr. V K Sehgal Professor & Chairman Civil Engineering Department NIT, Kurukshetra	Member

8.	Dr. S K Sharma Professor Mechanical Engineering Department, & Dean (Estate, Constn & Elect. Mtc.) NIT, Kurukshetra	Member
9.	Dr. K S Kasana Professor & Chairman Mechanical Engineering Department NIT, Kurukshetra	Member
10.	Dr. K-B Singh Professor Department of Humanities & Social Sciences NIT, Kurukshetra	Member
11.	Dr. A Swarup Professor & Chairman Electrical Engineering Department NIT, Kurukshetra	Member
12.	Dr. S K Chakarvarti Professor & Chairman Physics Department NIT, Kurukshetra	Member
13.	Dr. D V Singh Professor & Chairman Mathematics Department NIT, Kurukshetra	Member
14.	Dr. D.K. Soni Professor Civil Engineering Department & Chief Warden (Boys' Hostels) NIT, Kurukshetra	Member
15.	Dr. Kuldeep Kumar Professor Mathematics Department & C.O.E. NIT, Kurukshetra	Member
16.	Dr. S S Rattan Professor Mechanical Engineering Deptt. NIT, Kurukshetra	Member

17.	Dr. K.S. Sandhu Professor & Proctor Electrical Engineering Deptt. NIT, Kurukshetra	Member
18.	Dr. Sudhir Kumar Professor Mechanical Engineering Department NIT Kurukshetra	Member
19.	Dr. Baldev Setia Professor Civil Engineering Department & Prof. In-charge (Acad. Affairs) & Senate NIT, Kurukshetra	Member
20.	Dr. Rajender Kumar Professor & Chairman Department of Humanities & Social Sciences NIT, Kurukshetra	Member
21.	Dr. Brahmjit Singh Professor & Chairman Electronics & Comm Engg Department NIT Kurukshetra	Member
22.	Dr. Diwan Singh Professor Civil Engineering Department NIT, Kurukshetra	Member
23.	Dr. S.K. Madan Professor Civil Engineering Department NIT, Kurukshetra	Member
24.	Dr. H.K. Sharma Professor Civil Engineering Department NIT, Kurukshetra	Member
25.	Dr. (Ms) Lillie Dewan Professor Electrical Engineering Department NIT Kurukshetra	Member

26.	Dr. S.N. 'Sachdeva Professor Civil Engineering Department NIT, Kurukshetra	Member
27.	Dr. Dixit Garg Professor Mechanical Engineering Department NIT, Kurukshetra	Member
28.	Dr. S.K. Mahna Professor – Physics Department NIT, Kurukshetra	Member
29.	Dr. B.K. Kaushik Professor Physics Department NIT, Kurukshetra	Member
30.	Dr. J.K. Quamara Professor Physics Department NIT, Kurukshetra	Member
31.	Dr. P.J. Philip Professor Hum. & Social Sciences Department NIT, Kurukshetra	Member
32.	Dr. (Mrs.) Ratna Dahiya Asstt. Professor Electrical Engineering Department & Chief Warden (Girls' Hostels) NIT, Kurukshetra	Member
33.	Dr. D.P. Singh Assistant Professor & Chairman Chemistry Department NIT, Kurukshetra	Member
34.	Dr. A.K. Singh Asstt. Professor & Chairman Computer Engineering Department NIT, Kurukshetra	Member

35   Sh.R.P.S Lohchab   Member-Secretary
      Registrar & Member Secretary, Senate
      National Institute of Technology
      Kurukshetra.

      Shri Ravi Jaidka, President, Indian Sugar & Gen. Engg. Corporation,
Yamuna Nagar expressed his inability to attend the meeting.

The following members also could not attend the meeting:

1.   Prof. C.V. Ramakrishnan   Member
      Professor
      Department of Applied Mechanics
      Indian Institute of Technology
      New Delhi-110016

2.   Dr. Mrs. Renu Bhargava   Member
      Professor
      Civil Engineering Department
      Indian Institute of Technology
      Roorkee (Utrakhand)

3.   Dr. R.L. Sharma   Member
      Professor
      Civil Engineering Department
      National Institute of Technology
      Hamirpur. (HP)

4.   Dr. M.L. Kothari   Member
      Professor
      Electrical Engineering Department
      Indian Institute of Technology
      Hauz Khas, New Delhi. 110 016

5.   Er. Mukesh Gulati   Member
      Sr. Cluster Development Adviser
      United Nations Industrial Development Organization
      USO House, USO Road
      6 Special Institutional Area
      New Delhi. 110067

6.   Shri Adesh Gupta   Member
      Chief Executive Officer
      Liberty Group of Industries
      Karnal

7.	Dr. Ranjit Singh	Member
	Director	
	Netaji Subhash Institute of Technology	
	Azad Hind Fauj Marg, Sector-3, Dwarka	
	New Delhi	

8.	Dr. A K Gupta	Member
	Professor	
	Electronics & Communication Engg. Deptt.	
	NIT, Kurukshetra	

9.	Dr. R.C. Bhattacharjee	Member
	Professor	
	Civil Engineering Department	
	& Chairman, Business Administration Deptt.	
	NIT, Kurukshetra	

10.	Dr. N.K. Gupta	Member
	Professor	
	Civil Engineering Department	
	NIT, Kurukshetra	

11.	Dr. R.S. Bhatia	Member
	AP, EED & Chairman	
	Deptt. of Computer Application	
	NIT, Kurukshetra	

Item 11.1   To confirm the minutes of the 10th meeting of the Senate held on 29.11.2007.

The Senate confirmed the mintues of its 10th meeting held on 29.11.2007 as circulated to all the members of Senate and as enclosed as Appendix 11.1 to the agenda item.

Item 11.2   To note the Action Taken Report on the minutes of the 10th meeting of the Senate held on 29.11.2007

The Registrar and Member-Secretary intimated the house that action taken on the minutes of the 10th meeting of the Senate held on 29.11.2007 will be reported to the Senate in its next meeting.

The house noted the same.

Item 11.3   To consider approval for students to be awarded degrees in the 5th Convocation scheduled to be held on 10th February, 2008

The Senate considered and approved the award of degrees to the graduates of B.Tech, M.Tech and Ph.D in the 5th Convocation scheduled to be held on 10th February, 2008 as detailed in the agenda item 11.3 and supplementary agenda item 11.3(a).

The Senate also noted that during this Convocation, the Institute for the first time will be awarding the degree of Doctor of Philosophy.

Item 11.4:   To apprise the Senate of the launch of OPJEM (O.P Jindal Engineering and Management) scholarships for the year 2007

The Senate noted and approved the launching of OPJEM (O.P Jindal Engineering and Management) scholarships and also noted the recipients of the scholarship for the year 2007.

Item 11.5   To consider the approval for the students to be awarded Medals, Mementoes and Certificates in the 5th Convocation scheduled to be held on 10th February, 2008

The Senate considered and approved the award of various Medals, Mementoes and Certificates to the B.Tech students as detailed in the agenda item 11.5.

Item 11.6   To apprise the Senate of the agenda and decisions taken in 13th and 14th meetings of Standing Committee on Senate Affairs (SCSA) and to consider the same

The Registrar and Member-Secretary, Senate intimated the house that during the period between 10th meeting of Senate to the present (11th) meeting of the Senate, two meetings 13th & 14th of Standing Committee on Senate Affairs were held on 4.1.2008 and 17.1.2008 respectively. The minutes of the meetings had already been duly circulated to the all the members of the Senate by Professor Incharge (Academic Affairs & Senate) which had been appended along with the agenda item 11.6.

The Senate approved the minutes of the 13th and 14th SCSA meetings.

Item 11.7: To consider the request from B.Tech students for abolishment of Block System and to introduce re-evaluation of answer sheets

The request of B.Tech students for abolishment of 'Block System' and to introduce re-evaluation of answer sheets was discussed the house authorized the Director to constitute a Committee to look into the request made by the students. The recommendations to be made by the Committee will be brought back to the Senate for its approval.

Item 11.8: Any other item

(i) Under any other item, Dr. S.K. Chakarvarti, Chairman, Physics Department pointed out that the details of the MoU signed with the Concordia University, Montreal, Canada should be circulated in the Institute. The Director informed that the MoU as signed has since been circulated in all Departments. The broader details of the MoU are being worked out. In the meantime faculty members could send their suggestions to the Director regarding implementation of the MoU.

(ii) Dr. Diwan Singh, Professor, Civil Engg. Department was permitted by the Chair to raise a point regarding the basis for change of branch after the completion of B.Tech (1st Year). After brief discussion, it was decided to look into the details of the criteria and to suggest an alternative mode. This was to be done by the Academic Section.

The meeting ended with a vote of thanks to the Chair.

(R.P.S Lohchab)
Registrar & Member Secretary, Senate

Approved

(M.N. BANDYOPADHYAY)
Director and Chairman, Senate

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Item 12.2   To note the Action Taken Report on the minutes of the 10th meeting of the Senate held on 29.11.2007

The Action Taken Report on the minutes of the 10th meeting of the Senate held on 29.11.2007 is as under:-

Item No.	Agenda Item	Action Taken
10.1.	To note the new composition of Senate under NIT Act -2007 enforced w.e.f. 15th August, 2007	Composition of new Senate is under process
10.2	To consider nomination of one Professor and one Assistant Professor/Lecturer of the Institute on the Board of Governors as per NIT Act-2007	Nominated as per decision of the Senate
10.3	To confirm the minutes of the 9th meeting of Senate held on 18.1.2007	Minutes of the meeting were confirmed
10.4	To note the Action Taken Report on the minutes of the 8th meeting of the Senate held on 20.10.2006(which could not be reported in the 9th meeting of the Senate)	No further action is required
10.5	To note the Action Taken Report on the minutes of the 9th meeting of the Senate held on 18.1.2007	No further action is required
10.6	To apprise the Senate of the agenda and decisions taken in the 4th to 12th meetings of Standing Committee on Senate Affairs (SCSA)	Action taken
10.7	To consider the admissions status of various UG/PG courses for the Academic Session 2007-2008 in the Institute	No further action is required
10.8	To consider the report submitted by the Committee constituted by the Senate regarding consolidation of the information to be enshrined in the Ordinance of Studies for the Degree of Doctor of Philosophy (Ph.D.) of our Institute (Ref. Items 5.17, 7.7 and 8.3).	The recommendations submitted by the Committee have been approved by the Director and the amended Ordinance of Studies for the Degree of Doctor of Philosophy have come into force w.e.f. May 1, 2008.
10.9	Regarding decisions taken in the Board of Studies of Department of Civil Engg.	Decisions implemented

	I. To consider the reframing of course numbers of M.Tech (Civil) Environmental Engineering	
	II. To consider rearranging of certain M.Tech courses and course numbers	
	III. To consider modifications in the syllabi of existing B.Tech courses in Civil Engg.	
10.10	Regarding decisions taken in the Board of Studies of Department of Mechanical Engg.	Decisions implemented
	I. To consider re-naming of the three specializations of M.Tech	
	II. To consider change of Course No. of the subject of Probability and Statistics (IEM-213), B.Tech 3rd Semester	
10.11	Regarding Department and Course of Master of Computer Applications	The Senate approved the introduction of new course in Master of Computer Applications and also the constitution of BOS of the Deptt. and scheme and syllabi implemented
	I. To apprise the Senate of the introduction of new course in Master of Computer Applications	
	II. To note the constitution of Board of Studies of the Department of Computer Applications	
	III. To consider the Scheme and Syllabi of Master of Computer Applications 2nd Semester	
10.12	To ratify the action taken by the Chairman, Senate in approving the revised Scheme of 1st to 4th Semester and detailed Syllabi of 2nd to 4th Semester of MBA Course	The revised scheme of 1st to 4th semester and syllabi of 2nd to 4th semester of MBA course implemented
10.13	To consider NCC as an alternate course to Physical Education and Sports for the students of B.Tech 1st year.	Action taken
10.14	To re-consider Merit Scholarship on CGPA basis instead of the present SGPA basis	Action taken
10.15	To consider awarding of Medals and Prizes to M.Tech, MBA and MCA students	A Committee was constituted and report is awaited

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10.16	To consider the proposal of change of name of the Deptt. of Physics	Decision conveyed
10.17	To consider the proposal to constitute a Committee to review the Ordinance of Studies, Regulations and Scheme of Master of Technology in the Institute	As per decision of the Senate, a committee was constituted and Report of the committee is awaited
10.18	To consider the report submitted by the Committee constituted by the Chairman, Senate regarding fee structure for the members of staff of NIT, Kurukshetra for M.Tech. (Part-time) Degree Course.	Action taken
10.19	To consider that the Senate agenda may be circulated to members through e-mail/soft copy in future	Keeping in view the practical difficulties for the same, hard copies of agenda and minutes are being circulated
10.20	To consider to carry out admission to M.Tech during the month of June, 2007	Action taken
10.21	To consider the payment of remuneration to Academic Staff out of "Students Fund" (Official Transcripts)	No further action is required
10.22	To re-consider Academic Regulations regarding Convocation and use of Costume/Robes	Action taken
10.23	To consider request of Director of Sports of the Institute for changing nomenclature of the Sports Department	Decision conveyed

Item 12.3   To note the Action Taken Report on the minutes of the 11ᵗʰ meeting of the Senate held on 08.02.2008

The Action Taken Report on the minutes of the 10ᵗʰ meeting of the Senate held on 08.02.2008 is as under:-

Item No.	Agenda Item	Action Taken
11.1	To confirm the minutes of the 10ᵗʰ meeting of the Senate held on 29.11.2007	The minutes of the 10ᵗʰ meeting of the Senate were confirmed
11.2	Regarding Action Taken Report on the minutes of the 10ᵗʰ meeting of the Senate held on 29.11.2007	The Action Taken Report has already been placed in the current 12ᵗʰ meeting as an Agenda Item 12.2
11.3 & 11.3(a)	To consider approval for students to be awarded degrees in the 5ᵗʰ Convocation scheduled to be held on 10ᵗʰ February, 2008	Action taken
11.4	To apprise the Senate of the launch of OPJEM (O.P Jindal Engineering and Management) scholarship for the year 2007	Action taken
11.5	To consider the approval for the students to be awarded Medals, Mementoes and Certificates in the 5ᵗʰ Convocation scheduled to be held on 10ᵗʰ February, 2008	Action taken
11.6	To apprise the Senate of the agenda and decisions taken in 13ᵗʰ and 14ᵗʰ meeting of Standing Committee on Senate Affairs (SCSA) and to consider the same	No further action is required
11.7	To consider a request from B. Tech students for abolishment of Block System and to introduce re-evaluation of answer sheets	The matter regarding abolishment of Block System and to introduce re-evaluation of answersheets was was placed before the SCSA in its 15ᵗʰ meeting held on 4.3.2008 and SCSA decided to abolish the block system in B.Tech degree course and decided to introduce re-evaluation system with immediate effect. But on the request made by a large number of students, the SCSA in its 19ᵗʰ

		meeting held on 14.10.200 reverted to the system showing answerbooks to th students with effect from No Dec, 2008 examination onwards
11.8	(i) Under Any other item , Dr S.K. Chakarvarti the then Chairman of Physics Department requested for circulation of details of the MoU signed with the Concordia University, Montreal, Canada	(i)Action taken
	(ii) Dr. Diwan Singh, Professor, Civil Engg. Department raised a point regarding the basis for change of branch after the completion of B.Tech 1st year	(ii) Comment was received this item and the same h already been placed under ite 12.1 in the current 12th meeti of the Senate

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Item 12.4   To apprise the Senate of the agenda and decisions taken in 15th to 21st meetings of   Standing Committee on Senate Affairs (SCSA) and to consider and approve the same

After 11th meeting of the Senate, seven meetings of SCSA (from 15th to 21st) were held. The minutes of these meetings had already been circulated to all the members of Senate by Professor In charge (Academic Affairs & Senate) which have been enclosed as Appendix 12.4 from page 16 to 135.

The Senate may kindly consider and approve the decisions taken in the above mentioned meetings of Standing Committee of Senate Affairs.

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

No. Acad./2008/SCSA 15th mtg. /   Dated: 07.03.2008

Minutes of the 15th SCSA meeting held on 04.03.2008 at 05:00 PM
in the Board Room of the Institute

The following members were present during the meeting:

1. Dr. M.N. Bandyopadhyay, Director
2. Mr. RPS Lohchab, Registrar
3. Prof. R.K. Bansal, Dean (Academic)
4. Dr. T.K. Garg, Professor, Mech. Engg. Deptt.
5. Dr. S.P. Jain, Dean (P&D)
6. Dr. V.K. Sehgal, Chairman, Civil Engg. Deptt.
7. Dr. S.K. Sharma, Dean (E, C & EM)
8. Dr. K.S. Kasana, Chairman, Mech. Engg. Deptt.
9. Dr. A Swarup, Chairman, Electrical Engg. Deptt.
10. Dr. S.K. Chakarvarti, Chairman, Physics Deptt.
11. Dr. D.V. Singh, Chairman, Maths. Deptt.
12. Dr. R.C. Bhattacharjee, Chairman, Deptt. of Business Administration
13. Dr. Kuldeep Kumar, Controller of Examination
14. Dr. B.J. Singh, Chairman, ECCE Deptt.
15. Dr. P.J. Philip, Chairman, Deptt. of Hum. & Social Sciences
16. Prof. R.S. Bhatia, Chairman, MCA
17. Dr. A.K. Singh, Chairman, Compute Engg. Deptt.
18. Dr. Baldev Setia, Professor I/C Academic Affairs

The following decisions were taken:

1. Regarding abolishment of block system and to introduce re-evaluation of answer scripts for B.Tech. Programme.

   In pursuance of the minutes of the 11th meeting of the Senate vide Item No. 11.7, the Director had constituted a Committee of the following to look into the matter:

1. Dr. T.K Garg, Professor, MED   Chairman
2. Dr. Brahmjit Singh, Chairman, EC & CE   Member
3. Dr. Kuldeep Kumar, Controller of Exams.   Convener

The Committee submitted its report.

(a)   The recommendations of the Committee were discussed in details. It was queried from the Academic Section as to the number of students who were affected and how many subjects are involved. Quite lengthy and logical statements were given in favour of and against the item under consideration. However, sensing the urgency and difficulties faced by the students, the SCSA agreed to accept the recommendations of the Committee and decided to abolish the block system in B.Tech Degree Course with immediate effect. The decision of the SCSA will be taken in the next meeting of the Senate for approval.

(b)   It was also decided that the re-evaluation process would be carried out as mentioned below with effect from the next examination to be held in May/June.

(i)   The candidate will submit the request for re-evaluation of answer scripts on the prescribed application form accompanied by the original DMC along with re-evaluation fee of Rs.1000/- per subject within 20 days of the date of publication of the result or within 15 days of the date of despatch of DMC by the institute, whichever is later.

(ii)   Re-evaluation shall be got done from the faculty drawn from the Institutes of repute like IITs/ NITs/ DCE, Delhi / PEC Chandigarh /NSIT Delhi/TU, Patiala.

(iii)   If the increase in marks after re-evaluation is more than 10% of the maximum marks of the paper, the answer scripts will be sent to the second re-evaluator. Average of the two higher awards given by the re-evaluators/examiners will be taken into

consideration for final result-declaration. Fractional marks, if any, shall be rounded off.

(iv)   After completion of their studies for full duration of the course up to VIII semester, the candidate will be eligible to appear in examinations(s) as an ex-student for all the left- over papers.

(vi)   It was also decided that the re-evaluator will be paid @ Rs. 20/- per answersheet and a minimum of Rs. 200/-

(vii)   It was also decided that the practice of showing of evaluated answersheets to students prior to submission of awards to the Examination Cell will be dispensed with henceforth.

The meeting ended with a vote of thanks to the Chair.

31.03.2008

(BALDEV SETIA)
Professor Incharge (Acad. Affairs & Senate)

Approved

(M.N. Bandyopadhyay)
Director

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NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA- 136119

No. Dean (Acad.)/Senate 11th/2008

Dated 13.2.2008

In view of the decision taken by the Senate in its 11th meeting held on 8.2.2008 under Item No. 11.7 regarding abolishing of Block system for B.Tech students, the Hon'ble Director has constituted the following Committee to consider the issue in detail:

1. Dr. T.K.Garg, Professor, MED	Chairman
2. Dr. Brahmjit Singh, Chairman, EC & CE	Member
3. Dr. Kuldeep Kumar, Controller of Exams.	Convener

The Committee is requested to kindly take a decision at the earliest so that the recommendations can be taken up in the next Senate meeting.

Dean (Academic)

All members

Copy to

1. PS to Director for the kind information of the Director

2. PA to Registrar

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

No. Exam./08/ 4/   Dated: 27.02.2008
                                                                       28

Sub: Block system for B.Tech. Students.

This has reference to letter no Dean(Acad.)/senate 11th/2008 dated 13.02.2008.
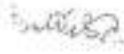
A committee consisting of the following members held several meetings and discussed the issue in detail:-

1.	Dr. T.K. Garg, Professor, MED	Chairman
2.	Dr. Brahmjit Singh, Chairman, EC & CE	Member
3.	Dr. Kuldeep Kumar, Controller of Exams	Convener

The recommendations of the committee are enclosed herewith.

(Dr. T.K. Garg) 28/2/08
Chairman

DA: As above

Dean (Acad.)

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NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA

No. Comm./block/2008/   Dated: 27.02.2008

Reference: No. Dean (Acad.) Senate 11ᵗʰ/2008; Dated: 13.02.2008
Regarding abolishment of block system and to introduce re-evaluation of answer scripts for B.Tech. Programme

The existing block system as stipulated under clause 3.2 of academic regulation for UG and PG programmes, National Institute of Technology, Kurukshetra. The relevant portion of the clause reads as follows:

A student who earns an E grade in a course shall have to re-appear in that course in the subsequent examination(s), subject to the following:

Provided that a candidate shall not be allowed to attend the classes and appear in it. The semester examination(s) mentioned in column (a), unless he/she has passed in the examination in the Semester Examination mentioned in column (b).

(a)	(b)
5ᵗʰ Semester onwards	1ˢᵗ Semester
6ᵗʰ Semester onwards	2ⁿᵈ Semester
7ᵗʰ Semester onwards	3ʳᵈ Semester
8ᵗʰ Semester onwards	4ᵗʰ Semester
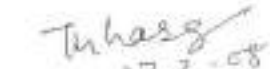
The matter was discussed at length. The problems faced by the students and the examination sections as well were also deliberated upon in detail. The existing rule puts a block to the movement of the student to higher semester. Looking into the mental agony experienced by the students, the committee recommends the following guidelines:

1.   The block system as mentioned above may be abolished for all batches covered under the rule. The number of extra chances will be restricted to that available within the maximum period of eight years. The candidate will be allowed to appear in the odd semester examination for odd semester course(s) and even semester examination for even semester course(s).

         (i)   The additional internal improvement chance will be restricted to one only in the immediate next relevant semester.

         (ii)   In case the student does not pass the internal component of examination, he/she has to repeat that course of study.

2.   The existing transparency system of showing the answer scripts to the students be abolished.

3. The re-evaluation process will be carried out as mentioned below:

(i) The candidate will submit the request for re-evaluation of answer scripts on the prescribed application form accompanied by the original DMC along with re-evaluation fee of Rs. 1000/-per subject within 20 days of the date of publication of the result or within 15 days of the date of dispatch of DMC by the Institute, whichever is later.

(ii) Re-evaluation shall be got done by the faculty drawn from the Institutes of repute like IITs/ NITs/ DCE, Delhi / PEC Chandigarh/NSIT Delhi/TU, Patiala.

(iii) If the increase of marks after re-evaluation is more than 10% of the maximum marks of the paper, the answer script will be sent to the second re-evaluator. Average of the two higher awards given by the re-evaluators/examiners will be taken into consideration for final result declaration. Fractional marks, if any, shall be rounded off.

(iv) After completion of their studies for whole duration of the course up to VIII semester, the candidate will be eligible to paper in examinations(s) as an ex-student for all the left over papers.

Bishmoti
27.52.00
(Dr. Brahmjit Singh)

(Dr. Kuldeep Kumar)

Tuharg
27.2.08
(Dr. T.K.Garg)

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

Dated: 26.3.2008

Minutes of the 16th SCSA meeting held on 25.3.2008
at 5.00 PM in the Board Room of the Institute

The following were present:-

1.	Dr. M.N.Bandyopadhyay, Director	In Chair
2.	Sh. R.P.S Lohchab, Registrar	Member-Secretary, Senate
3.	Prof. R.K.Bansal, Dean (Academic)	
4.	Dr. T.K Garg, Professor, Mech. Engg. Deptt.	
5.	Dr. S.P Jain, Dean (P&D)	
6.	Dr. V.K.Sehgal, Chairman, Civil Engg. Deptt.	
7.	Dr. S.K. Sharma, Dean (Estale, Const. & EM)	
8.	Dr. K.S Kasana, Chairman, Mech Engg. Deptt.	
9.	Dr. A. Swarup, Chairman, Elect Engg. Deptt.	
10.	Dr. S.K Chakarvarti, Chairman, Physics Deptt.	
11.	Dr. D.V.Singh, Chairman, Maths. Deptt.	
12.	Dr. R.C Bhattacharjee, Chairman, BA Deptt.	
13.	Dr. Brahmjit Singh, Chairman, ECE Deptt.	
14.	Dr. PJ Phillip, Chairman, Hu & SS Deptt.	
15.	Prof. R.S Bhatia, Chairman, Computer Applications Deptt.	
16.	Dr. D.P Singh, Chairman, Chemistry Deptt.	
17.	Dr. A.K. Singh, Chairman, Computer Engg. Deptt.	
18.	Dr. Baldev Setia, Professor Incharge(Acad.Affairs & Senate)	

The following were Special-invitee:

1. Dr. N.K Gupta, Professor, Civil Engg. Deptt.
2. Dr. Dinesh Khanduja, Asstt. Prof., Civil Engg. Deptt.

1. To consider and approve the revised scheme for MBA

The letter on the item received from the Chairman, Business Administration Department was placed before the Committee. It was made clear that the Course No. MBA-308, though rightly nomenclatured, had inadvertently been placed in the table listing courses of Second Semester. The error was rectified and the Course No. MBA-308: Summer Training was included in the list of courses of 3rd Semester.

In addition, the Chairman Business Business Administration was requested to re-nomenclature the course numbers in accordance with the practice in vogue in the Institute for B.Tech courses.

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2. To consider and approve the Academic Calendar 2008-09

The draft of the Academic Calendar of the session 2008-09 was discussed and analyzed. Certain suggestions were made. Prof-in-Charge Academic Affairs & Senate was asked to incorporate the suggested changes and also modify the draft for minor corrections of date/day, format etc.

3. To incorporate the course on Data Structure in B.Tech 7th Semester Electronics & Communication Engg.

The course on Data Structure in B.Tech 7th Semester Electronics & Communication Engg., as proposed by the Chairman, Electronics & Communication Department and duly approved by the Board of Studies of the concerned department, was approved as Departmental Elective. However, the Chairman, Electronics Department was requested to indicate the credits assigned etc. in accordance with the prevalent practice.

4. To consider and approve the schemes of three specializations in M.Tech (Mechanical Engg.)

The matter was discussed and sensing the pitfalls in the proposed documents, the department was asked to modify the same and get it routed through the BOS of the department.

5. Any other item with the permission of the Chair

Dr. Dinesh Khanduja, who had been invited as Special Invitee to attend the meeting, was asked to apprise the members of the proposal of the Institute to start a Centre for Continuing Education in the Institute. Dr. Khanduja apprised the members of the proposal based on IIT, Roorkee model. The Departments were asked to prepare suitable proposals for conducting specialized courses and submit the same to the Professor Incharge Continuing Education Centre. These proposals will then be scrutinized by a Committee to be formed later.

The meeting ended with a vote of thanks to the Chair.

March 28, 2008
(BALDEV SETIA)
Professor Incharge (Acad. Affairs & Senate)

Approved
(M.N. Bandyopadhyay)
Director

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DEPARTMENT OF BUSINESS ADMINISTRATION
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

Date: March 17, 2008

No. BA/573

While getting the scheme of MBA approved by Board of Studies (BOS) of the Department, Course No. 308-Summer Training was inadvertently shown in 2nd semester instead of 3rd semester. It is, therefore, necessary to rectify the scheme so that the 3rd semester result of the MBA students can be declared by the Controller of Examination.

In view of the above, the Chairman, Senate is requested to approve the following revised scheme for MBA in anticipation of approval of BOS/Senate.

SEMESTER-I

Course No.	Course Title	L	T	P	T	Credit
MBA-101	Principle & Practices of Management	3	1	0	4	3.5
MBA-102	Organization Behaviour	3	1	0	4	3.5
MBA-103	Managerial Economics	3	1	0	4	3.5
MBA-104	Management Accounting	3	1	0	4	3.5
MBA-105	Marketing Management	3	1	0	4	3.5
MBA-106	Business Communication	3	1	0	4	3.5
MBA-107	Business Statistics	2	1	0	3	2.5
MBA-108	Computing skills	1	2	0	3	2.0

Credits: 25.5

SEMESTER-II

Course No.	Course Title	L	T	P	T	Credit
MBA-201	Financial Management	3	1	0	4	3.5
MBA-202	Human Resource Management	3	1	0	4	3.5
MBA-203	Production & Operations Management	3	1	0	4	3.5
MBA-204	Management Information System	3	1	0	4	3.5
MBA-205	Quality Management	3	1	0	4	3.5
MBA-206	Business Environment	3	1	0	4	3.5
MBA-207	Business Ethics	2	1	0	3	2.5
MBA-208	Business Application Software	0	0	4	4	2.0

Credits: 25.5

SEMESTER-III

Course No.	Course Title	L	T	P	T	Credit
MBA-301	International Business	3	1	0	4	3.5
MBA-302	Business Law & Corporate Taxation	3	1	0	4	3.5
MBA-303	Entrepreneurship & Project Management	3	1	0	4	3.5
311/321/331/341	Maj. Specialization HRM (Any 3 electives)	3	1	0	4	3.5(each)
312/322/332/342	Maj. Specialization Financial Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
313/323/333/343	Maj. Specialization Marketing Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
314/324/334/344	Maj. Specialization IT Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
315/325/335/345	Maj. Specialization IB Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
	Minor Specialization (Any 2 electives out of a Maj. Specialization other than one's own Maj. Spln.)	3	1	0	4	3.5(each)
MBA-308	Summer Training				150	4.0

Credits: 32.0

SEMESTER-IV

Course No.	Course Title	L	T	P	T	Credit
MBA-401	Strategic Management	3	1	0	4	3.5
MBA-402	E-Commerce	3	1	0	4	3.5
MBA-403	Project	-	-	-	200	6.0
411/421/431/441	Maj. Specialization HRM (Any 3 electives)	3	1	0	4	3.5(each)
412/422/432/442	Maj. Specialization Financial Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
413/423/433/443	Maj. Specialization Marketing Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
414/424/434/444	Maj. Specialization IT Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
415/425/435/445	Maj. Specialization IB Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
	Minor Specialization (Any 2 electives out of a Maj. Specialization as chosen in 3rd Semester)	3	1	0	4	3.5(each)

Credits: 30.5

(R C BHATTACHARJEE)
CHAIRMAN

DIRECTOR

Copy to:
Dean Academic for information and necessary action please.

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ACADEMIC CALENDAR SESSION 2008-2009

ODD SEMESTER

Sr. NO.	ACTIVITY	PERIOD
1.	Registration	16th to 19th July 2008 (Wednesday to Friday)
2.	Classes commence	21.07.2008 (Monday)
3.	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	28.07.2008 (Monday)
4.	Mid-Semester Exams-I	28.08.2008 (Thursday) to 30.08.2008 (Saturday)
5.	Mid-Semester Vacation	03.10.2008(Friday) to 10.10.2008 (Friday)
6.	Mid-Semester Exams-II	16.10.2008 (Thursday) to 18.10.2007 (Saturday)
7.	Literati-2009	To be proposed by the Professor I/C Literati
8.	Mid-Semester Exams-III	May be arranged by the respective teachers as per their convenience
9.	End of Teaching	14.11.2008 (Friday)
10.	End Semester Exams begin	21.11.2008 (Monday)
11.	Winter Vacation	01.12.2008 (Monday) to 12.12.2008 (Friday)
12.	Declaration of Result	By the end of December 2008

EVEN SEMESTER

1.	Registration	29th to 31st December '008 (Monday to Wednesday)
2.	Classes commence	01.01.2009 (Thursday)
3.	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	05.01.2009 (Monday)
4.	Convocation	First fortnight of January 2009
5.	Mid-Semester Exams-I	05.02.2009 (Thursday) to 07.02.2009 (Saturday)
6.	Athletic Meet	13.02.2009 (Friday) to 15.02.2009 (Sunday)
7.	Confluence-2009	5th to 7th March 2009 (Thursday to Saturday)
8.	Mid Semester Vacation	09.03.2009 (Monday) to 13.03.2009 (Friday)
9.	Mid-Semester Exams-II	19.03.2009 (Thursday) to 21.03.2009 (Saturday)
10.	Mid-Semester Exams-III	May be arranged by the respective teachers as per their convenience
11.	End of Teaching	10.04.2009 (Thursday)
12.	End Semester Exams begin	13.05.2009 (Monday)
13.	Summer Vacation	25.05.2009 (Monday) to 03.07.2009 (Friday)
14.	Practical Training Starts	27.05.2009 (Wednesday)
15.	Declaration of Result	By the end of May 2009

GAZETTED HOLIDAYS

August 2008
15 Fri   Independence Day

October
02 Thu   Mahatma Gandhi's B'day
02 Thu   Idu'l Fitar
09 Thu   Dussehra
28 Tue   Deepavali

November
11 Thu   Guru Nanak's B'day

December
09 Tue   Idu'l Zuha (Bakrid)
25 Thu   Christmas Day

January 2009
07 Wed   Muharram
26 Mon   Republic Day

March
11 Wed   Holi

April
01 Fri   Ram Navami
10 Fri   Good Friday

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Dean (Academic)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

No. ECE/HOS/BR/H2-85   Date: 15.2.2008

Minutes of the Board of Studies meeting of ECE held on 21.02.2008 at 4.35 p.m. in the Departmental Conference room

The following members were present:

1.	Dr. Brahmjit Singh, Professor	In Chair
2.	Dr. A.K. Gupta, Professor	Member
3.	Dr. Umesh Ghanekar, Asst. Prof.	Member
4.	Dr. O. P. Sahu, Assistant Professor	Member
5.	Dr. Rajoo Pandey, Asstt Prof.	Member
6.	Prof. Mohd. Arif, Lecturer Selection Grade	Member
7.	Prof.(Mrs.) Vrinda Gupta, Sr.Lecturer	Member
8.	Prof. Karan Sharma,Lecturer Selection Grade	Member

The following decisions were taken:

1. To consider the appointment of internal examiners for Practical examinations and paper setters/evaluators for theory papers of B.Tech. ECE and M. Tech. ECE & VLSI Design for academic session even semester 2007-08.

    The BOS approved the names of the examiners for the above mentioned examinations as listed in Annexure-I.

*   To consider the DRC recommendations for Ph.D. registration.

    The BOS considered and recommended the name of candidates for onward transmission for Ph.D. registration as listed in Annexure-II.

*   To consider appointment of external examiners for M.Tech. Dissertation for academic session 2007-08.

    The BOS approved the names of examiners for external evaluation of M.Tech. Dissertation as listed in the Annexure-III. The respective topics of dissertation will be intimated on 15.4.2008.

1. The Chairman submitted a proposal to include a course on Data Structure in 7th semester B.Tech. ECE Programme in the list of Departmental Electives-I. The BOS recommended the inclusion of ECE-415 Data Structure in the list of Departmental Elective-I, B.Tech. ECE programme.

                                                                Brahmjit
                                                             (Brahmjit Singh 26/02)
                                                                Chairman

Copy to:

1. All Members of BOS of ECE
2. Dean(Acad.) with the request to put an item at Sr No. 1 in the senate meeting for kind consideration
3. Dr. BVR Reddy, Professor, University School of IT, Indraprastha University, Kashmere Gate, Delhi-110006
4. Dr. SS Pattnaik, Professor & Head, Dept. of ECE, NITTTR, Sector 26, Chandigarh-160017
5. Controller of Exams, NIT, Kurukshetra
6. PS to Director for kind information of the Director

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B. Tech. VII Semester
Data Structures
(ECT-445)

L T P
3 1 -

UNIT 1: Sets and Propositions

Introduction, Combination of sets, Finite and Infinite sets, Uncountably Infinite Sets, Mathematical Induction, Principle of Inclusion and Exclusion, Multisets, Properties of Binary Relations, Equivalence Relations and Partitions, Partial Ordering Relations, Functions and Pigeonhole Principle, Propositions.

Unit 2: Algebraic System

Definitions and elementary properties of algebraic structures, Semigroups, monoids and submonoids, Groups and subgroups, Homomorphisms and Isomorphisms of Monoids and Groups, Definition and Examples of Rings and Subrings, Types of Rings, Commutative Ring, Ring with Unity, Ring with or without Zero divisions, Integral Domain, Division Ring, Relation of Isomorphism in the set of rings, Field, its characteristics and subfield.

Unit 3: Graphs and Planar Graphs

Introduction, Basic Terminology, Multigraphs and Weighted Graphs, Paths and Circuits, Shortest Paths in Weighted Graphs, Eulerian Paths and Circuits, Hamiltonian Paths and Circuits, Planar Graphs, Trees, Rooted Trees, Path Lengths in Rooted Trees, Binary Search Trees, Spanning Trees and Cut-sets, Minimum Spanning Trees.

Unit 4: Permutations, Combinations and Recurrence Relations

The Rules of Sum and Product, Permutations, Combinations, Generation of Permutations and Combinations, Recurrence Relations, Linear Recurrence Relations with Constant Coefficients, Homogeneous Solutions, Particular Solutions, Total Solutions, Solution by the Method of Generating Functions.

Note: -

1. The question paper shall consist of eight questions in all. The candidate shall have to attempt five questions.

2. Eight questions will be organized into four sections, each section having two questions from each of the four units. The students will be required to attempt at least one question from each of the four units.

BOOKS

1. C.L. Liu, Elements of Discrete Mathematics

2. Kenneth Kalmanson: An Introduction to Discrete Mathematics and its Applications; Addison Wesley Publishing Co., 1986.

3. J.P. Tremblay: Discrete Mathematical Structures with Applications to Computer Science. McGraw Hill. N.Y., 1977.

DEPARTMENT OF MECHANICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

L.No. MED/2008/ _268_   Dated: 20.03.2008

The Senate in its 10th meeting held on 29th November 2007 approve the renaming the three specializations of M.Tech Mechanical Engineering wide item no. 10.10 as follows:-

1. Master of Technology in Mechanical Engineering (Thermal Engineering)
2. Master of Technology in Mechanical Engineering (CAD/CAM)
3. Master of Technology in Mechanical Engineering (Machine Design)

The Board of Studies of the Department of Mechanical Engineering in its meeting held on 17th September 2007 passed a resolution that the scheme of three specializations be prepared by the department in consultation of DRC and DAC of the department, which have been prepared. This may be considered and approved so that it can be implemented with effect from the session 2008-09.

Chairman Mechanical

Professor Incharge Academic Affairs & Senate

Master of Technology in Mechanical Engineering (Thermal Engineering)

Semester-I

MTT-101	Advanced Fluid Engineering
MTT-102	Advanced Heat & Mass Transfer
MTT-103	Refrigeration Engineering
	Elective-I (Production)
	Elective-II (Design)
MTT-104	Lab (Elective)

Semester- II

MTT-201	Computational Fluid Dynamics
MTT-202	Advanced Internal Combustion Engine
	Elective-I (Design)
	Elective-II (Production)
MTT-203	Computational Fluid Dynamics Lab
MTT-204	Seminar

Semester-III

MTT-301	Elective (Thermal)
MTT-302	Elective (Thermal)
MTT-303	Elective (Thermal)
MTT-304	Project / Lab

Semester-IV

MTT-401	Dissertation

List of Electives (For Thermal Stream)

1.	MTT-311	Direct Energy Conversion
2.	MTT-312	Air Conditioning
3.	MTT-313	Gas Dynamics
4.	MTT-314	Cryogenics
5.	MTT-315	Nuclear Engineering
6.	MTT-316	Solar Energy
7.	MTT-317	Renewable Energy & Energy Management

List of Electives (For Other Streams)

1.	MTT-101	Advanced Fluid Engineering
2.	MTT-102	Advanced Heat & Mass Transfer
3.	MTT-103	Refrigeration Engineering
4.	MTT-201	Computational Fluid Dynamics
5.	MTT-312	Air Conditioning
6.	MTT-317	Renewable Energy & Energy Management
7.	MTT-318	Gas Turbine & Jet Propulsion

Master of Technology in Mechanical Engineering (CAD/CAM)

Semester-I

MTP-101	Thermo Fabrication
MTP-102	Advance Manufacturing Techniques
MTP-103	Computer Aided Manufacturing
	Elective (Thermal)
	Elective (Design)
MTP-104	Lab

Semester- II

MTP-201	Non Conventional Machining
MTP-202	Mechatronics
	Elective (Design)
	Elective (Thermal)
MTP-203	Lab
MTP-204	Seminar

Semester-III

MTP-103	Elective (CAD/CAM)
MTP-302	Elective (CAD/CAM)
MTP-303	Elective (CAD/CAM)
MTP-304	Project/Lab

Semester-IV

MTT-401	Dissertation

List of Electives (CAD/CAM)

MTP-311	Project Management
MTP-312	Operations Management
MTP-313	Experimental Designs
MTP-314	Quality & Reliability Management
MTP-315	Production, Planning & Control
MTP-316	Computer Integrated Manufacturing
MTP-317	Machine Vision

List of Electives (For Other Streams)

MTP-202	Mechatronics
MTP-311	Project Management
MTP-312	Operations Management
MTP-313	Experimental Designs
MTP-314	Quality & Reliability Management
MTP-315	Production, Planning & Control
MTP-316	Strategic Entrepreneurship
MTP-317	Machine Vision
MTP-318	Materials Management
MTP-319	Ergonomics
MTP-320	Logistics & Supply Chain Management
MTP-321	Productivity Management

Master of Technology in Mechanical Engineering (Machine Design)

Semester-I

MTD-101	Computer Aided Design (CAD)
MTD-102	Advanced Kinematics and Dynamics of Mechanisms
MTD-103	Advanced Mechanical Vibrations
	Elective-I (Thermal)
	Elective-II (Production)
MTD-104	CAD Lab

Semester-II

MTD-201	Applied Numerical Methods
MTD-202	Advanced Mechanics of Solids
	Elective-I (Thermal)
	Elective-II (Production)
MTD-203	Advanced Mechanical Vibrations Lab
MTD-204	Seminar

Semester-III

MTD-301	Elective-(Design)
MTD-302	Elective-(Design)
MTD-303	Elective-(Design)
MTD-304	Project/LAB (Applied Numerical Methods Lab)

Semester-IV

MTD-401	Dissertation

List of Electives (For Design Streams)

1.	MTD-311	Industrial Robotics
2.	MTD-312	Measurement and Control
3.	MTD-313	Advanced Fluid Engineering
4.	MTD-314	Advanced Tribology
5.	MTD-315	Machine Vision
6.	MTD-316	Experimental Stress Analysis
7.	MTD-317	Finite Element Methods

List of Electives (For other Streams)

1.	MTD-101	Computer Aided Design (CAD)
2.	MTD-102	Advanced Kinematics and Dynamics of Mechanisms
3.	MTD-103	Advanced Mechanical Vibrations
4.	MTD-201	Applied Numerical Methods
5.	MTD-202	Advanced Mechanics of Solids
6.	MTD-311	Industrial Robotics
7.	MTD-312	Measurement and Control
8.	MTD-317	Finite Element Methods

No. Acad./17ᵗʰ SCSA/5126-72   Dated: 27.5.2008
                                                    2/6/

Minutes of the 17ᵗʰ SCSA meeting held on 5ᵗʰ May, 2008 at 3.30 PM in the Board Room of the Institute

The following were present:-

1.	Dr. M.N.Bandyopadhyay, Director	In Chair
2.	Mr. R.P.S Lohchab, Registrar	Member-Secretary, Senate
3.	Prof. R.K.Bansal, Dean (Academic)	
4.	Dr. S.P Jain, Dean (P&D)	
5.	Dr. V.K.Sehgal, Chairman, Civil Engg. Deptt.	
6.	Dr. S.K. Sharma, Dean(Estate, Const. & EM)	
7.	Dr. K.S.Kasana, Chairman, Mech. Engg. Deptt.	
8.	Dr. A. Swarup, Chairman, Elect Engg. Deptt.	
9.	Dr. S.K. Chakarvarti, Chairman, Physics Deptt.	
10.	Dr. D.V.Singh, Chairman, Maths. Deptt.	
11.	Dr. R.C Bhattacharjee, Chairman, Business Administration Deptt.	
12.	Dr. Kuldeep Kumar, Controller of Exams.	
13.	Dr. Brahmjit Singh, Chairman, ECE Deptt.	
13.	Dr. P.J Phillip, Chairman, Hum. & Social Scs Deptt.	
14.	Dr. R.S Bhatia, Chairman, Computer Applications Deptt.	
15.	Dr. A.K Singh, Chairman, Computer Engg. Deptt.	
16.	Dr. Baldev Setia, Professor Incharge, Acad.Affairs & Senate	

The following decisions were taken:

. **To consider renaming of the M.Tech Courses of Mechanical Engg. Deptt. as proposed by the Department.**

The SCSA considered renaming of the M.Tech Courses of Mechanical Engg. Deptt. as proposed by the Department. The Chairman, Mechanical Engg. Department apprised the members the need for renaming of the said courses. The matter was thoroughly discussed and finalized. The Committee approved the same.

. **To consider changes in the Schemes of M.Tech (Instrumentation) and M.Tech (Nano-Technology)**

The SCSA considered changes in the Schemes of M.Tech (Instrumentation) and M. Tech (Nano-Technology) as proposed by the Physics Department. The changes had been necessitated following the request by Chairman, Mechanical Engg. Deptt. and accordingly the

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courses which are taught by the faculty of Mechanical Engg. to M.Tech (Instrumentation and Nano-Technology students) have been shifted. The Committee approved the proposal of the Physics Department to be effective from the academic session 2008-09.

3. **To consider inclusion of Course No. HUT-311: Business Management in B.Tech 5th/6th Semester for the students of IT and IEM**

The Course No. HUT-311: Business Management is taught by Department of Humanities & Social Sciences to all the students of B.Tech during the Third Year of courses of study. For the students of B.Tech IT & IEM entering the Third Year with effect from the academic session 2008-09, it was decided that this course would be taught during the 6th Semester. The Committee considered the matter following the request of Chairman, Humanities & Social Sciences Department and approved the same.

4. **Any other item**

Under any other item, the following items were permitted by the Chair for discussion:

(i) With effect from the next academic session, i.e. 2008-09, for a subject a minimum of 9N classes (9 times number of classes to be held in a week) must be engaged by the teacher in a semester.

(ii) All the B.Tech students will be allowed to appear in the Odd Semester examination for Odd Semesters and Even Semester for Even Semester courses, for improvement of internal assessment and end semester examinations with effect from the academic session 2008-09 except the students of B.Tech 8th Semester. The B.Tech 8th Semester students will be allowed to appear in both Odd and Even Semester examinations. This had been taken up in accordance with the recommendations of the Committee comprising of Dr. T.K. Garg, Dr. Brahmjit Singh and Dr. Kuldeep Kumar constituted for abolishing the Block System, the report of which had been considered during the 15th meeting of the Standing Committee on Senate Affairs held on 4.3.2008

(iii) At present, the Examination Cell is preparing DMCs mentioning the SGPA as well as CGPA. It was decided that henceforth, in DMCs of 6th, 7th and 8th Semester, both SGPA as well as CGPA will be mentioned and in the DMCs of 1st to 5th Semesters, only SGPA will be mentioned. For those students who have courses in the lower semesters to be cleared, only SGPA will be mentioned and no CGPA will be computed.

(iv) The Dean (Academic) apprised the Committee of the offer of MHRD to conduct short-term courses in the Institute. A letter alongwith guidelines received from the AICTE in this regard has already been circulated to all the Departments of the Institute. The Chairmen of the Departments were requested to prepare their proposals as early as possible.

(v)   Dr. A Swarup, Co-ordinator, TEQIP sought the opportunity to apprise the members of the remarks made by Prof. A N Jha, Auditor, TEQIP during his recent visit to the Institute. The salient points emerged from the feedback that the Auditor received from the students were:

(a)   Students' Representation in decision making process
(b)   Delay in declaration of results
(c)   Relevance and updating of courses and syllabi of B.Tech subjects
(d)   Faculty shortage
(e)   Regarding transparency in evaluation system
(f)   Examination reforms

(vi)   The Chair asked the Chairmen of all the Departments to send estimates of the extra faculty and expenditure to be involved in terms of additional faculty and infrastructure to be created on account of 54% additional intake (due to OBC) as per AICTE norms.

The meeting ended with a vote of thanks to the Chair.

Baldev . 27.05.2008
(BALDEV SETIA)
Professor Incharge (Acad. Affairs & Senate)

Approved

(M.N Bandyopadhyay)
Director

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No.MED/08/ 343

DEPARTMENT OF MECHANICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

Dated: 17.04.2008

The Mechanical Engineering Department in his BOS meeting held on 16.04.2008, it was decided and recommended that three M.Tech. Courses will be renamed as:

1) Master of Technology (Industrial and Production Engineering)
2) Master of Technology (Machine Design)
3) Master of Technology (Thermal Engineering)

Chairman
Mech. Engg. Deptt.

Director

Copy to:
1. Dean (Academic)
2. File copy

MASTER OF TECHNOLOGY IN MECHANICAL ENGINEERING
(MACHINE DESIGN)

SEMESTER-I		L	T	P/D	Total	Cr.
MTD-501	Computer-Aided Design	3	1	-	4	3.5
MTD-503	Design of Mechanisms	3	1	-	4	3.5
MTD-505	Advanced Mechanical Vibrations	3	1	-	4	3.5
-	Elective-I (Thermal)	3	1	-	4	3.5
-	Elective-II (Production)	3	1	-	4	3.5
MTD-507	Computer-Aided Design Lab	-	-	2	2	1.0
					Total	18.5

SEMESTER-II		L	T	P/D	Total	Cr.
MTD-502	Applied Numerical Methods	3	1	-	4	3.5
MTD-504	Advanced Mechanics of Solids	3	1	-	4	3.5
-	Elective-I (Thermal)	3	1	-	4	3.5
-	Elective-II (Production)	3	1	-	4	3.5
MTD-506	Advanced Mechanical Vibrations Lab	-	-	2	2	1.0
MTD-508	Seminar	-	-	2	2	1.0
					Total	16.0

SEMESTER-III		L	T	P/D	Total	Cr.
-	Elective-I (Machine Design)	3	1	-	4	3.5
-	Elective-II (Machine Design)	3	1	-	4	3.5
-	Elective-III (Machine Design)	3	1	-	4	3.5
MTD-509	Applied Numerical Methods Lab	-	-	2	2	1.0
					Total	11.5

SEMESTER-IV	
MTD-520	Dissertation

LIST OF ELECTIVES (MACHINE DESIGN)

1.	MTD-511	Industrial Robotics
2.	MTD-512	Measurement and Control
3.	MTD-513	Experimental Stress Analysis
4.	MTD-514	Advanced Tribology
5.	MTD-515	Optimization Techniques
6.	MTD-516	Computer-Aided Engineering
7.	MTD-517	Finite Element Methods

LIST OF ELECTIVES (THERMAL)

1.	MTT-501	Advanced Fluid Engineering
2.	MTT-503	Advanced Heat & Mass Transfer
3.	MTT-505	Refrigeration Engineering
4.	MTT-506	Computational Fluid Dynamics
5.	MTT-512	Air Conditioning
6.	MTT-517	Renewable Energy & Energy Management
7.	MTT-518	Gas Turbine & Jet Propulsion

LIST OF ELECTIVES (INDUSTRIAL & PRODUCTION)

1	MTI-501	Production, Planning & Control
2.	MTI-504	Mechatronics
3.	MTI-511	Material Management
4.	MTI-512	Operations Management
5.	MTI-516	Strategic Entrepreneurship
6.	MTI-517	Machine Vision
7.	MTI-518	Productivity Management
8.	MTI-519	Ergonomics

MASTER OF TECHNOLOGY IN MECHANICAL ENGINEERING (INDUSTRIAL & PRODUCTION ENGINEERING)

SEMESTER-I		L	T	P/D	Total	Cr.
MTI-501	Production, Planning & Control	3	1	-	4	3.5
MTI-503	Advanced Manufacturing Techniques	3	1	-	4	3.5
MTI-505	Computer Aided Manufacturing	3	1	-	4	3.5
-	Elective-I (Thermal)	3	1	-	4	3.5
-	Elective-II (Machine Design)	3	1	-	4	3.5
MTI-507	Advanced Manufacturing Techniques Lab	-	-	2	2	1.0
					Total	18.5

SEMESTER-II		L	T	P/D	Total	Cr.
MTI-502	Non Conventional Machining	3	1	-	4	3.5
MTI-504	Mechatronics	3	1	-	4	3.5
-	Elective-I (Thermal)	3	1	-	4	3.5
-	Elective-II (Machine Design)	3	1	-	4	3.5
MTI-506	Mechatronics Lab	-	-	2	2	1.0
MTI-508	Seminar	-	-	2	2	1.0
					Total	16.0

SEMESTER-III		L	T	P/D	Total	Cr.
-	Elective-I (I&P)	3	1	-	4	3.5
-	Elective-II (I&P)	3	1	-	4	3.5
-	Elective-III (I&P)	3	1	-	4	3.5
MTI-509	CAD/CAM Lab	-	-	2	2	1.0
					Total	11.5

SEMESTER-IV	
MTI-520	Dissertation

LIST OF ELECTIVES (INDUSTRIAL & PRODUCTION)

1.	MTI-511	Material Management
2.	MTI-512	Operations Management
3.	MTI-513	Experimental Designs
4.	MTI-514	Thermo Fabrication
5.	MTI-515	Quality &Reliability Management
6.	MTI-516	Strategic Entrepreneurship
7.	MTI-517	Machine Vision
8.	MTI-518	Productivity Management

LIST OF ELECTIVES (THERMAL)

1.	MTT-501	Advanced Fluid Engineering
2.	MTT-503	Advanced Heat & Mass Transfer
3.	MTT-505	Refrigeration Engineering
4.	MTT-506	Computational Fluid Dynamics
5.	MTT-512	Air Conditioning
6.	MTT-517	Renewable Energy & Energy Management
7.	MTT-518	Gas Turbine & Jet Propulsion

LIST OF ELECTIVES (MACHINE DESIGN)

1.	MTD-501	Computer-Aided Design
2.	MTD-502	Applied Numerical Methods
3.	MTD-503	Design of Mechanisms
4.	MTD-504	Advanced Mechanics of Solids
5.	MTD-505	Advanced Mechanical Vibrations
6.	MTD-511	Industrial Robotics
7.	MTD-512	Measurement and Control
8.	MTD-517	Finite Element Methods

MASTER OF TECHNOLOGY IN MECHANICAL ENGINEERING
(THERMAL)

SEMESTER-I		L	T	P/D	Total	Cr.
MTT-501	Advanced Fluid Engineering	3	1	-	4	3.5
MTT-503	Advanced Heat & Mass Transfer	3	1	-	4	3.5
MTT-505	Refrigeration Engineering	2	1	-	4	3.5
-	Elective-I (Machine Design)	3	1	-	4	3.5
-	Elective-II (Production)	3	1	-	4	3.5
MTT-507	Advanced Heat Transfer Lab	-	-	2	2	1.0
					Total	18.5

SEMESTER-II		L	T	P/D	Total	Cr.
MTT-502	Computational Fluid Dynamics	3	1	-	4	3.5
MTT-504	Advanced Internal Combustion Engine	3	1	-	4	3.5
-	Elective-I (Machine Design)	3	1	-	4	3.5
-	Elective-II (Production)	3	1	-	4	3.5
MTT-506	Computational Fluid Dynamics Lab	-	-	2	2	1.0
MTT-508	Seminar	-	-	2	2	1.0
					Total	16.0

SEMESTER-III		L	T	P/D	Total	Cr.
-	Elective-I (Thermal)	3	1	-	4	3.5
-	Elective-II (Thermal)	3	1	-	4	3.5
-	Elective-III (Thermal)	3	1	-	4	3.5
MTT-509	Refrigeration & Air-Conditioning Lab	-	-	2	2	1.0
					Total	11.5

SEMESTER-IV	
MTT-520	Dissertation

LIST OF ELECTIVES (THERMAL STREAM)

1.	MTT-511	Direct Energy Conversion
2.	MTT-512	Air Conditioning
3.	MTT-513	Gas Dynamics
4.	MTT-514	Cryogenics
5.	MTT-515	Nuclear Engineering
6.	MTT-516	Solar Energy
7.	MTT-517	Renewable Energy & Energy Management
8.	MTT-518	Gas Turbine and Jet Propulsion

LIST OF ELECTIVES (MACHINE DESIGN)

1.	MTD-501	Computer-Aided Design
2.	MTD-502	Applied Numerical Methods
3.	MTD-503	Design of Mechanisms
4.	MTD-504	Advanced Mechanics of Solids
5.	MTD-505	Advanced Mechanical Vibrations
6.	MTD-511	Industrial Robotics
7.	MTD-512	Measurement and Control
8.	MTD-517	Finite Element Methods

LIST OF ELECTIVES (INDUSTRIAL & PRODUCTION)

1.	MTI-501	Production, Planning & Control
2.	MTI-504	Mechatronics
3.	MTI-511	Material Management
4.	MTI-512	Operations Management
5.	MTI-516	Strategic Entrepreneurship
6.	MTI-517	Machine Vision
7.	MTI-518	Productivity Management
8.	MTI-519	Ergonomics

DEPARTMENT OF MECHANICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

No.MED/08/ 311   Dated: 07.04.2008

The DAC of Mech. Engg. Deptt. held on 2ⁿᵈ April, 2008 has decided as per
Item No.9 that Mech. Engg. Deptt. is teaching two courses of
M.Tech.(Instrumentation) and M.Tech.(Nanotechnology) of Physics Deptt. The
Mech. Engg. Deptt. is heavily loaded in the odd semester due to the three regular
M.Tech. courses, B.Tech. Mechanical (90), IEM (60). Due to the shortage of the
senior faculty, the Department is not in a position to be spared the senior faculty
to teach these M.Tech. courses in odd semester. Therefore, if the Physics Deptt.
wants that these courses be taught by the Mech. Engg. Deptt. they should modify
their scheme to adjust these courses in the 2ⁿᵈ semester of M.Tech.
(Instrumentation and Nanotechnology)

Chairman
Mech. Engg. Deptt.

Chairman,
Physics Deptt.

M. put up this note
in the next meeting of
DAC/BOS

Copy to:

1. D.S. to Director for information to the Director
2. Dean (Academic)
3. File copy

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No.Ph/2008/   Dated: 01.05.2008

Mechanical Engineering Department has been sharing two courses with Physics Department viz, (1) Instrumentation Manufacturing Techniques in 1st Semester of M. Tech. (Instrumentation)and (2) Nanotribology in 3rd Semester of M. Tech (Nanotechnology). However Chairman, Mechanical Engineering Department has desired vide letter No. MED/08/311 dated 07.04.08 (Copy enclosed) that above two courses may be shifted to 2nd Semesters in view of heavy load in odd Semester in the Department, in case Physics Department wants us to teach the aforementioned courses. To bring about the changes as per the proposal of Chairman Mechanical Engineering Department, the Board of Studies of Physics Department has approved for incorporating the desirable changes in the schemes of M. Tech. (Instrumentation) and M .Tech. (Nanotechnology). These relevant modifications envisaged in the schemes of M. Tech. (Instrumentation) and (Nanotechnology) are as follows:

M. Tech. (Instrumentation)

In Existing Scheme			In proposed Scheme		
Semester	Course	Code	Semester	Course	Code
1st	Instrumentation Manufacturing Techniques	M-651	2nd	Instrumentation Manufacturing techniques	M-652
2nd	X-rays and Biomedical Instrumentation	Ph-658	1st	X-rays and Biomedical Instrumentation	Ph-658

M. Tech. (Nanotechnology)

In Existing Scheme			In Proposed Scheme		
Semester	Course	Code	Semester	Course	Code
3rd	Nanotribology	MNT-307	2nd	Nanotribology	MNT-208

The proposed changes, if approved, would be effective from new semester i.e. July/Aug 2008 onwards.

(S.K. Chakarvarti)
Chairman

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No. Hum. & SS/08/ 481   Dated: 1.5.2008

Business Management (HUT-311) is a compulsory course for the students of 5th / 6th Semester. As students of IT & IEM are coming into the third year in the academic year 2008-09, it is suggested that Business Management be included in the 6th Semester for these students.

The respective departments may kindly be informed accordingly.

(P. J Philip)
Chairman

Dean/Professor-Incharge(Academic)

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

No. Acad./18th SCSA/ 〜 ヶゔ 8~ /ゎ〜 /9.   Dated   4.9.2008

Minutes of the 18th SCSA meeting held on 3rd September, 2008 at 4.35 PM in the Board Room of the Institute

The following were present:-

1	Dr. M.N.Bandyopadhyay, Director	In Chair
2	Sh. R.P.S Lohchab, Registrar	Member-Secretary, Senate
3	Prof. R.K.Bansal, Dean (Academic)	
4	Dr. T.K Garg, Professor, Mech. Engg. Deptt	
5	Dr. S.P.Jain, Dean (P&D)	
6	Dr. V.K.Sehgal, Chairman, Civil Engg. Deptt	
7	Dr. K.S.Kasana, Chairman, Mech. Engg. Deptt.	
8	Dr. A. Swarup, Chairman, Elect Engg. Deptt	
9	Dr. Brahmjit Singh, Chairman, ECE Deptt.	
10	Dr. R.K Deswal, Controller of Exams	
11	Dr. S.K. Mahna, Chairman, Physics Deptt.	
12	Dr. P.J Philip, Chairman, Hum. & Social Scs Deptt.	
13	Dr. R.S Bhatia, Chairman, Computer Applications Deptt	
14	Dr. A.K Singh, Chairman, Computer Engg. Deptt.	
15	Dr. D.P Singh, Chairman, Chemistry Department	
16	Dr. Baldev Setia, Professor Incharge, Acad Affairs & Senate	

The following decisions were taken:

1. To consider the Scheme and Syllabii of M.Tech Computer Engg. (full time) to be started from July, 2009

    The SCSA considered the Scheme and Syllabii of M.Tech Computer Engg. (full time) to be started from July, 2009 and approved the same.

2. To consider changes in the tenure of the summer vacation in the Academic Calendar for the session 2008-09

    The SCSA considered the changes in the tenure of the summer vacation in the Academic Calendar for the session 2008-09 and approved the same as per the demand of the Non-Teaching Karamchari Sangh Association.

3. To consider establishment/creation of Information Technology and Industrial Engineering & Management Departments.

    The SCSA did not agree for the creation of Information Technology and Industrial Engineering & Management Departments.

4. To consider new syllabus from B.Tech 6th Semester Course No. CET-302; Design of Steel Structures – II and M.Tech Course No. CET-633; Advanced RCC Design.

The SCSA considered new syllabus from B.Tech 6th Semester Course No. CET-302; Design of Steel Structures – II and M.Tech Course No. CET-633 ;Advanced RCC Design and approved the same.

5. To consider the request of Chairman, Computer Engg. Department regarding number of Ph.D scholars to be registered under a faculty member.

The requests of Chairmen, Computer Engg. and Mechanical Engg. Departments regarding number of Ph.D scholars to be registered under a faculty member were considered by SCSA and it was approved that 4.5 candidates can be registered under each faculty member instead of earlier practice of 4 candidates under the supervision of each faculty member.

6. To consider nomination of two students on the Senate from amongst the toppers of B.Tech 3rd and 4th Year

The SCSA considered the issue of nomination of two students on the Senate from amongst the toppers of B.Tech 3rd and 4th year but in light of the constitution of senate under the statute following the NIT Act, did not agree on this issue. However it was suggested by the members that the concerned authorities should periodically give an opportunity to the students' representatives to express their views on academic matters.

7. Any other item

Under any other item, the scheme and syllabus of MCA 3rd and 4th semesters was considered and approved by the SCSA.

The meeting ended with thanks to the Chair.

(BALDEV SETIA)
Professor I/C (Acad. & Senate Affairs)

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COMPUTER ENGINEERING DEPARMENT
NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

No. CO/BOS/2008/227

Dated: 11.7.2008

A meeting of Board of Studies in Computer Engineering Department was held on 10.7.2008 at 4.00 p.m. in the office of the undersigned. Following were present.

1. Dr. A.K. Singh	(In chair)
2. Dr. Mayank Dave	Member
3. Dr. J.K. Chhabara	Member
4. Prof. R.K. Aggarwal	Member
5. Prof. R.M. Sharma	Member
6. Dr. S.K. Jain	Special Invitee

Following decisions were taken:

1. The Scheme and Syllabus of B.Tech. Information Technology (5th and 6th Semesters) was passed unanimously.

2. The Scheme and Syllabus of M.Tech. Computer Engineering (full time) to be started from July, 2009 was passed unanimously.

However, one respected BOS member had certain observations regarding M.Tech. Computer Engineering (copy enclosed).

(A.K. Singh)
Chairman

All members

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OBSERVATION

Earlier in Computer Engg., there were
5 faculty members & B Tech (Co) intake
was 33. Due to this shortage of faculty,
dept did not start M. Tech. (Co). Now
in Computer Engg, there are only 6 faculty
members of B. Tech. (Co) intake is 67, which
will increase to 93 in next 2 years.
Inspite of such acute shortage of
faculty, starting of M. Tech (Co) at
this stage will badly affect the
academic standards of B. Tech (Co)

10-7-08.

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Department of Computer Engineering
NIT Kurukshetra (Haryana)
Scheme for the course Master of Technology in Computer Engineering

| SN | Subject | | Teaching Schedule | | | | Examination Schedule | | | | | Credit |
| | Code | Title | L | T | P | Total | Th | Sess | P/V | Total | Duration of Exam | |

First Semester

SN	Code	Title	L	T	P	Total	Th	Sess	P/V	Total	Duration	Credit
1	MTCOT-101	Advanced Data Structures and Algorithms	3	1	–	4	60	40	–	100	3	4
2	MTCOT-103	Advanced Computer Architecture	3	1	–	4	60	40	–	100	3	4
3	MTCOT-105	Software Architecture	3	1	–	4	60	40	–	100	3	4
4	MTCOT-107	Topics in Computer Networks	3	1	–	4	60	40	–	100	3	4
5	MTCOT-109	Elective I	3	1	–	4	60	40	–	100	3	4
6	MTCOT-111	Laboratory I	–	–	4	4	–	60	40	100	3	2
	Load of the semester					24	Total credits in the semester					22

Second Semester

SN	Code	Title	L	T	P	Total	Th	Sess	P/V	Total	Duration	Credit
1	MTCOT-102	Mobile Computing	3	1	–	4	60	40	–	100	3	4
2	MTCOT-104	Advanced Database Systems	3	1	–	4	60	40	–	100	3	4
3	MTCOT-106	Natural Language Processing	3	1	–	4	60	40	–	100	3	4
4	MTCOT-108	Elective-II	3	1	–	4	60	40	–	100	3	4
5	MTCOT-110	Seminar	–	2	–	2		100	–	100	–	1
6	MTCOT-112	Laboratory-II	–	–	4	4		60	40	100	3	2
	Load of the semester					22	Total credits in the semester					19

Third Semester

SN	Code	Title	L	T	P	Total	Th	Sess	P/V	Total	Duration	Credit
1	MTCOT-201	Distributed Computing Systems	3	1	–	4	60	40	–	100	3	4
2	MTCOT-203	Elective-III	3	1	–	4	60	40	–	100	3	4
3	MTCOT-205	Elective-IV	3	1	–	4	60	40	–	100	3	4
4	MTCOT-207	Seminar on Dissertation Proposal	–	2	–	2	–	100	–	100	–	2
5	MTCOT-209	Laboratory-III	–	–	4	4	–	60	40	100	3	2
6	MTCOT-211	Dissertation (also to continue in the IV semester)	–	–	–	–	–	100	–			4
	Load of the semester					18	Total credits in the semester					20

Fourth Semester

SN	Code	Title	L	T	P	Total	Th	Sess	P/V	Total	Duration	Credit
1	MTCOT-202	Dissertation (continued from the III semester)	–	–	–	–	–	–	–	–	–	20
							Total credits in the semester					20
	Total credits in all four semesters								81			

The evaluation of the dissertation may be categorized as "Accept" / "Accept with changes" / "Reject." For successful completion of the M.Tech in Computer Engg., a student's dissertation should fall in either "Accept" or "Accept with changes" category.

List of Elective Courses

	Elective-I		Elective-II		Elective-III		Elective-IV
	MTCOT-109		MTCOT-108		MTCOT-203		MTCOT-205
a.	Topics in Internet Technologies	a.	Software Project Management	a.	Data Mining	a.	Query Optimization
b.	Mobile Ad hoc and Wireless Sensor Networks	b.	Agent Systems	b.	Embedded System	b.	Fault Tolerant Computing
c.	Multimedia Technologies	c.	Functional Programming	c.	Machine Translation	c.	Knowledge Discovery
d	Real Time System	d.	Topics in Data Structures and Algorithms	d.	Advanced Compiler Optimization	d.	Object Oriented Software Modeling

MTCOT-101
Advanced Data Structures and Algorithms

Abstract data types and data structures, Classes and objects, Complexity of algorithms: worst case, average case, and amortized complexity. Algorithm analysis. Algorithm Design Paradigms. Lists: stacks, queues, implementation, garbage collection. Dictionaries: Hash tables, Binary search trees, AVL trees, Red-Black trees, Splay trees, Skip-lists, B-Trees: Priority queues. Graphs: Shortest path algorithms, minimal spanning tree algorithms, depth-first and breadth-first search. Sorting: Advanced sorting methods and their analysis, lower bound on complexity, order statistics.

References:

1. A.V. Aho, J.E. Hopcroft, and J.D. Ullman, Data Structures and Algorithms, Addison Wesley, Reading Massachusetts, USA, 1983.
2. T.H. Cormen, C.E. Leiserson, and R.L. Rivest, Introduction to Algorithms, The MIT Press, Cambridge, Massachusetts, USA, 1990.
3. M.A. Weiss, Data Structures and Algorithms Analysis in C++, Benjamin/Cummins, Redwood City, California, USA, 1994

MTCOT-103
Advanced Computer Architecture

Processor architecture, pipelining, vector processing, superscalar processors, hardware and compiler support for branch prediction, out-of-order Instruction issue, speculative execution and other techniques for high-performance. Instruction and data cache organizations, multilevel caches, parallel memory systems, Support for virtual memory, Multiple processor systems, taxonomy, programming models, message passing systems, Interconnection networks, shared memory system, memory models, cache coherence, I/O systems, parallel disk organizations, Introduction to advanced topics.

References

1. Hwang and F.A.Briggs: Computer Architecture and Parallel Processing, McGraw Hill.
2. Hennessy, J.L., and Patterson, D.A., Computer Architecture, A quantitative Approach, Morgan Kaufmann,
3. Stone, H.S., High-Performance Computer Architecture Addison-Wesley.

MTCOT-105
Software Architecture

Software process and the role of modeling and analysis, software architecture, and software design.

Software Modeling and Analysis: analysis modeling and best practices, traditional best practice diagrams such as DFDs and ERDs, UML diagrams and UML analysis modeling, analysis case studies, analysis tools, analysis patterns.

Software Architecture: architectural styles, architectural patterns, analysis of architectures, formal descriptions of software architectures, architectural description languages and tools, scalability and interoperability issues, web application architectures, case studies.

Software Design: design best practices, design patterns, extreme programming, design case studies, component technology, object oriented frameworks, distributed objects, object request brokers, case studies.

References

1. Booch, G., Rumbough, J., Jacobson, I., The Unified Modeling Language User Guide, Addison-Wesley, 1999
2. Gamma, E., Helm, R. Johnson, R. Vlissides, J., Design Patterns, Elements of Reusable Object-Oriented Software, Addison-Wesley, 1995
3. Frank Buschmann et al. Pattern Oriented Software Architecture, Volume 1: A System of Patterns. John Wiley and Sons. 1996.
4. Shaw, M., and Garlan, D., Software Architecture: Perspectives on an Emerging Discipline, Prentice-Hall, 1996
5. Len Bass et al. Software Architecture in Practice. Addison Wesley, 1998.

MTCOT-107
Topics in Computer Networks

MAC Protocols for high speed and wireless networks - IEEE 802.3 standards for fast Ethernet, gigabit Ethernet, 10G, and 100VG-AnyLAN, IEEE 802.11, 802.15, and 802.16 standards for Wireless PAN, LAN, and MAN

IPv6: IPv4 versus IPv6, basic protocol, Header- extensions and options, support for QoS, security, etc., neighbour discovery, auto-configuration, DHCPv6, IPv6 Routers and Routing.

Mobility in networks - Mobility Management: Cellular architecture, Mobility: handoff, types of handoffs; location management, HLR-VLR scheme, Mobile IP and IPv6

IP Multicasting. Multicast routing protocols, address assignments, session discovery, etc. IPsec protected channel service, virtual private network service, multiprotocol label switching, MPLS VPN

Traffic Types, TCP extensions for high-speed networks, transaction-oriented applications, Other improvements in TCP, Performance issues, TCP Congestion Control – fairness, scheduling and Delay modeling, QoS issues, differentiated services

Network security at various layers. Security related issues in mobility. Secure-HTTP; SSL. Message digests, Key distribution protocols. Digital signatures, and digital certificates.

Books and References:

1. W. R. Stevens. TCP/IP Illustrated, Volume 1: The protocols. Addison Wesley, 1994.
2. G. R. Wright. TCP/IP Illustrated, Volume 2: The Implementation. Addison Wesley, 1995.
3. W. R. Stevens. TCP/IP Illustrated, Volume 3: TCP for Transactions, HTTP, NNTP, and the Unix Domain Protocols. Addison Wesley, 1996.
4. W. Stallings. Cryptography and Network Security: Principles and Practice. 2nd Edition. Prentice Hall, 1998.
5. C. E. Perkins, B. Woolf, and S. R. Alpert. Mobile IP: Design Principles and Practices. Addison Wesley, 1997.
6. J.F. Kurose and K. W. Ross, Computer Networking – A Top-down Approach Featuring the Internet, Pearson Education, New Delhi, 2004.
7. N. Olifer & V. Olifer, Computer Networks: Principles, Technologies, and Protocols for network Design, Wiley-Dreamtech Low Price, New Delhi

MTCOT-102

Mobile Computing

Introduction: Challenges in mobile computing, coping with uncertainities, resource poorness, bandwidth, etc. Device-independent view component. Location management techniques, mobility pattern, call arrival pattern

Publishing & Accessing Data in Air: Pull and push based data delivery models, data dissemination by broadcast, broadcast disks, directory service in air, energy efficient indexing scheme for push based data delivery.

Location Update Strategies, Locating mobile objects, architecture, mobile agent systems

Context Aware Mobile Computing, context acquisition, context awareness

Cache management – cache consistency strategies, cache invalidation schemes, Hoarding in mobile computing environments, power aware and energy efficient schemes for cache invalidation

File System Support for Mobility: Distributed file sharing for mobility support, Coda and other storage manager for mobility support

Mobile Transaction and Commerce: Models for mobile transaction. Kangaroo and Joey transactions, team transaction. Recovery model for mobile transactions. Consistency and Concurrency Model

Books and References:

1. Theodore S. Rappaport, Wireless Communications: Principles and Practice, Second Edition, Prentice Hall, 2002.
2. Ivan Stojmenovic, Handbook of Wireless Networks and Mobile Computing, John Wiley & Sons, 2002.
3. Mohd. Ilyas & Imad Mahgoub, Mobile Computing Handbook, CRC Press/Aurbach Publications, ISBN 0-8493-1971-4, Boca Raton USA, 2005

MTCOT-104
Advanced Database Systems

Object-oriented Databases, Distributed and Parallel Databases, Multi-databases, Deductive Databases, Multimedia Databases, Real-Time Databases, Active Databases, Temporal Databases, Mobile Databases, Transaction Management, Query Processing, Database Benchmarks, Database Security, Data Mining and Data Warehousing.

Books and References:

1. Readings in Database Systems edited by Joseph M. Hellerstein and Michael Stonebraker, eds. 4th ed, MIT Press, 2005.
2. Conference and Journal papers.

MTCOT-106
Natural Language Processing

A computational framework for natural language. A framework such as LFG, GPSG or paninn in some depth. Partial description of English or an Indian language in the frame work, lexicon, algorithms and data structures for implementation of the framework. Introduction to semantics and knowledge representation. Some applications like machine translation, database interface.

Books and References:

1. Akshar Bharati, Vineet Chaitanya, and Rajeev Sangal, NLP: A Paninian Perspective, Prentice Hall, New Delhi, 1994.
2. T. winograd, Language as a cognitive Process, Addison-Wesley, 1983.

MTCOT-201
Distributed Computing Systems

Fundamental Issues in Distributed Systems, Distributed System Models and Architectures, Classification of Failures in Distributed Systems, Basic Techniques for Handling Faults in Distributed Systems, Logical and Physical Clocks, Physical Clock Synchronization, Interprocess Communication, Broadcast Protocols, Naming in Distributed Systems, Global State, Termination, and Distributed Deadlock Detection

Distributed Mutual Exclusion, Leader Election, Agreement Protocols, Group Membership Protocols, Distributed Scheduling and Load Balancing - Distributed File Systems, and Distributed Shared Memory, Security and Fault-Tolerance Issues, Case Studies of Distributed Systems.

Books and References:

1. Distributed Systems :Concepts and Design; O Colouris, J Dollimore, T Kindberg 3/e Pearson Ed. 2002.
2. Distributed Systems :Principles and Paradigm; Andrew S Tanenbaum, Maarten van Steen 3/e Pearson Ed. 2002.
3. Principles of Distributed Systems, VK Garg, Kluwer Academic Publishers, 1996.
4. Distributed Systems and Algorithmic Approach by Su Kumar Boss, Chanul & Hall.
5. Principles of Distributed Computing by V K Garg, IEEE Press.
6. Distributed Computing by A D Kshem Kalyani & Mukesh Singha.
7. Distributed Algorithms by Nancy Lynch, Morgan Kaufmann Press.
8. Introduction to Distributed Algorithms by G Tel, Cambridge University.

MTCOT-109 (a)
Topics in Internet Technologies

Today the Internet is being used for myriad of applications – electronic publishing, electronic commerce, distance education, collaborative working, etc. This course intends to investigate the underlying principles and practices that support these applications. Introduction to computer networks; Content preparation – HTML, DHTML, VRML, SGML, XML and other markup schemes; Images – compression formats; Audiocompression, formats; content Delivery, - protocols-HTTP and variants, Internet servers, proxy servers; Search engines; Data on the web; Content Display – browsers, plugins, helper applications; Interactivity – Java, Active-X; Component technologies, Javabeans, COBRA; Security. Electronic payment systems, Firewalls, Encryption. Watermarks; Performance, Benchmarking the web.

Books, References, Websites:

www.w3.org
www.ietf.org
www.omg.org
www.xml.org
www.microsoft.com/com
java.sun.com
Research papers

MTCOT-109 (b)
Mobile Ad hoc and Wireless Sensor Networks

Mobile Ad hoc Networks (MANET) – Mobility Management, modeling distributed applications for MANET, MAC mechanisms and protocols

MANET Routing Protocols: Ad hoc network routing protocols, destination sequenced distance vector algorithm, cluster based gateway switch routing, global state routing, fisheye state routing, dynamic source routing, ad hoc on-demand routing, OLSR & TORA routing, location aided routing, zonal routing algorithm.

Ad hoc network security – Link layer, Network layer; Trust and key management

Self policing MANET – Node Misbehaviour, secure routing, reputation systems

Wireless Sensor Networks (WSN) – Design Issues, Clustering, Applications of WSN

MAC layer and routing protocols in WSN

Data Retrieval Techniques in WSN – Sensor databases, distributed query processing, Data dissemination and aggregation schemes.

Operating Systems for WSN

Security issues in WSN.

Books and References:

1. C. Siva Ram Murthy & B.S. Manoj, Mobile Ad hoc Networks – Architectures & Protocols, Pearson Education, New Delhi, 2004
2. C M Cordeiro & D.P. Agrawal, Adhoc & Sensor Networks – Theory and Applications, ISBN 981-256-682-1, World Scientific Singapore, 2005
3. C. S. Raghvendra, Wireless Sensor Networks, Springer-Verlag, 2006 (Available as E-Book at NIT Kurukshetra Purchased in 2006)

MTCOT-109 (c)
Multimedia Technologies

Introduction: Video, Audio, Image compression: JPEG, GIF, Video compression MPEG-1, -2, -4, and -7, H.261, MPEG Audio compression, AC 3, Content based retrieval. Multimedia networking: ATM, RTP, RSVP, RTSP, Multicasting, Storage and server issues. Multimedia processors, Mobile multimedia, Watermarking, Multimedia systems: VoD, video and conferencing, HDTV.

Books and References:
To be announced by the instructor.

MTCOT-109 (d)
Real Time Systems

Typical Applications: embedded controllers, Multimedia, On-board computers, buisness systems, Real-time system specifications. Modeling techniques, design schedulability analysis, Scheduling: preemptive and non-preemptive, on-line, distributed, hard and soft constraints, periodic tasks with precedence relationships, task replication. Reconfigurations, load adjustment and processor utilization. Dependable communication, primary backup channels, router architecture. Quality of service and criticality, Operating systems, Development and testing of real-time software.

Books and References:
1. Daniel Evashara, Real-time Systems: A Practical Introduction, Galgotia, New Delhi, 1990.
2. Shem-Tov Levi and Ashok Agrawal, Real-time System Design, McGraw Hill, 1992.
3. Alan Burns and Andy Wellings, Real-time Systems and their Programming Languages.
4. Alan Burns and Andy Wellings "Real-Time Systems and Programming Languages, Ada 95, Real-Time Java and Real-Time POSIX" Third Edition, Addison Wesley Longmain.

MTCOT-108 (a)
Software Projects Management

-Managing Software Projects: Processes and Project Management. Project Management and the CMM. Overview of the CMM, KPAs for Project Management, The Project Management Process.

Process Planning: The Standard Process, Process Tailoring, Tailoring for Short Duration Projects, Requirement Change Management, The Change Management Process.
Effort Estimation and Scheduling: Estimation and Scheduling Concepts, Effort Estimation Models, Estimating Schedule, Effort Estimation, the Use Case Points Approach, Effectiveness of the Overall Approach, Effort Estimate of the ACIC Project, Scheduling, Overall Scheduling, The Effectiveness of the Approach, Detailed Scheduling;
Quality Planning: Quality Concepts, Procedural-Approach to Quality Management, Quantitative Approaches to Quality Management, Quantitative Quality Management Planning, Setting the Quality Goal, Estimating Defects for Other Stages, Quality Process Planning, Defect Prevention Planning.
Risk Management: Concepts of Risks and Risk Management, Risk Assessment, Risk Identification, Risk Prioritization, Risk Control, Risk Management Planning, Risk Monitoring and Tracking.
Measurement and Tracking Planning: Concepts in Measurement, Metrics and Measurements, process Monitoring through Statistical Process Control, Measurements, Collecting Effort Data, Logging and Tracking Defects, Measuring Schedule, Measuring Size, Project Tracking.
The Project Management Plan.: Team Management, Team Structure, Communication, Team development, Customer Communication and Issue Resolution, The Structure of the project management plan.
Configuration Management: Concepts in Configuration Management, The configuration management Process, planning and Setting Up Configuration Management, Perform Configuration Control, Status Monitoring and Audits.
Reviews: The Review Process, Planning, Overview and Preparation, Group Review Meeting, Rework and Follow-up, one person Review, Guidelines for Reviews in Projects.
Project Monitoring and Control: Project Tracking, Activities Tracking, Defect Tracking, Issues Status Reports, Milestone analysis.
Project Closure: Project Closure Analysis, The Role of Closure Analysis, Performing Closure Analysis, Closure Analysis Report.

Books and References:
1. Software Project Management in Practice By Pankaj Jalote, Published by Addison Wesley Professional.

MTCOT-108 (b)
Agent Systems

The Agent Landscape: Introduction, Terminology, Multi agent systems, Formal framework for agent definition and development.

The SMART Agent Framework: Introduction, Initial concepts, Objects, Agents, Autonomy, Applying SMART at Tropistic Agents.

Agent Relationships: Introduction, Multi agent systems, Goal generation, Goal adoption, Engagement, Cooperation, The agent society, agent relationship taxonomy.

An operational analysis of agent relationships, Sociological agents, Autonomous interaction, The Contract Net as a goal directed system, Computational architecture for BDI agents, evaluating social dependence networks, normative agents.

Books and References:
1. Mark d Inverno and Michael Luck "Understanding Agent Systems" 2nd edition, Springer 2004.

MTCOT-108 (c)
Functional Programming

ML (CAML dialect); X-calculus and combinators; abstraction and higher order functions; lazy and eager evaluation; types, polymorphism and type inference; Equations and pattern matching; SECD machine; denotational semantics of functional languages; implementing functional languages

References:

To be announced by the instructor.

MTCOT-108 (d)
Topic in Data Structures and Algorithms

Design and analysis of algorithms including data structures, lower bound proofs, amortized complexity of algorithms.

Fibonacci heaps and self-adjusting search trees, Splay trees, linking and cutting trees. State-of-the-art algorithms for minimum spanning trees, shortest path problem, Network flows- preflow-push algorithms, max flow algorithm and scaling algorithms. Matching, blossoms, Micali-Vazirani algorithms. Lower bound theory for parallel computations.

Books and References
1. R.E.Tarjan. Data structures and Network Algorithms, SHAM Press, 1983
2. J.H.Hastad. Computational Limitations for Small Depth Circuits, MIT Press, 1987.
3. K.Melhorn.Data Structures and Algorithms, Vol.i:Sorting and Searching, Springer Verlag, 1984.
4. K.Melhorn.Data Structures and Algorithms, Vol.3:Multi-dimensional Searching and Computational Geometry, Springer Verlag, 1984.
5. Research papers.

MTCOT-203 (a)
Data mining

1. Introduction:-
What is data mining, data mining functionalities, classification of data mining systems, major issues in data mining.

2. Data warehouse and OLAP Technology:-
Data warehouse, multidimensional data model, data warehouse architecture, implementation, data cube technology.

3. Data Preprocessing: -
Data cleaning, data integration and transformation, data reduction, discretization and concept hierarchy generation.

4. Data Mining Languages
Data Mining Primitives, data mining query language, GUI for data mining system, architecture of data mining system.

5. Concept description
Generalization and summarization based characterization, analytical characterization. Mining class comparisons, mining descriptive statistical measures in large databases.

6. Mining association rules in large database
Mining single dimensional boolean association rules, mining multilevel association rules, mining multidimensional association rules, correlation analysis, constraint based association mining.

7. Classification and Prediction:-
Different issues regarding classification and prediction.

8. Cluster Analysis:-
Types of data in cluster analysis, categorization and discussion of major clustering methods.

9. Mining Complex Types of Data:-
Mining spatial, multimedia, text, time series and web data.

10. Application trend in data mining

Books and References:

1. Data Mining concepts and techniques, Jiawei Han, Micheline Kamber, 2nd ed., Morgan Kaufmann Publishers.

MTCOT-203 (b)
Embedded Systems

Examples of embedded systems: characteristics and requirements; Sensors and devices, theory of sampling, analog-to-digital and digital-to-analog conversions, data encoding, Data communications in embedded environments; bus structures and protocols, access control methods; Data communications in embedded environments; bus structures and protocols, access control methods. I/O organizations: device interfaces, processor interfaces, time-critical I/O handling, Structures of embedded operating systems cross development and debugging techniques and tools.

Codesign Overview, Models and Methodology of Embedded System codesign, Hardware Software partitioning and Scheduling, Cosimulation, High level Synthesis (HW) and functional verification.

Books and References:
1. The Art of Programming Embedded Systems; Jack G. Ganssle, Academic press.
2. Intelligent Embedded Systems, Louis L. Odette, Addison-Wesley, 1991
3. J. Staunstrup and W. Wolf, editors, Hardware/Software Co-Design: Principles and Practice, Kluwer Academic Publishers, 1997.

MTCOT-203 (c)
Machine Translation

Overview of Natural Language Processing, Syntax,Semantics,Context and world of knowledge, Strategies for machine translation, Direct, Transfer and Interlingua approaches; Rule-based, Example based on Hybrid Methodologies; Construction of lexical database, Text generation, machine –aided translation, user interfaces; Example of English Hindi and Hindi English Machine Translation

Books and References:
To be announced by the instructor.

MTCOT-203 (d)
Advanced Compiler Optimization

Introduction to Advanced topics, Compiler Algorithms Notation, Symbol table structure, Intermediate representation, Run time support, Producing code generators automatically, Control flow analysis, Data flow analysis, Dependence analysis and dependence graphs, Alias analysis, Introduction to optimizations, Early optimizations, Redundancy elimination, Loop optimizations, procedure optimizations, Register allocation, Code scheduling, control flow and low level optimizations, Inter procedural Analysis and optimizations, Optimization for memory hierarchy, Case studies.

Books and References:

1. Steven S. Muchnick. Advanced Compiler Design Implementation . Morgan Kauffman Publishers, 1997.
2. Wolfe. High Performance Compilers for Parallel Computing .
3. Zima and Chapman. Supercompilers for Parallel and Vector Computers.
4. Utpal Banerjee. Dependence analysis for supercomputing .
5. Wolfe. Optimizing Supercompilers for Supercomputers
6. Ellis. Bulldog: A Compiler for VLIW Architectures .
7. A. V. Aho, R. Sethi, and J. D. Ullman. Compilers: Principles, Techniques and Tools . Addison-Wesley 1988.
8. Hecht. Flow Analysis of Computer Programs.
9. Research Papers.

MTCOT-205 (a)
Query Optimization

Optimization and evaluation of relational queries: conjunctive query optimization, optimization of queries involving union and difference operators, algorithms for performing joins. Limitations of relational algebra as a query language. Fixed-point queries and Horn-clause queries. Optimization and evaluation of Horn-clause queries: filtering data flow method, magic set and generalized counting methods, clause and literal deletion problems. The boundedness problem, reducing the complexity of recursion. Duplicate clause removal, Incorporating functions, sets and negations into Horn-clause queries.

Books and References:

1. J. D. Ullman. Principles of Database and Knowledge Base Systems , Vol I & II. Computer Science Press, 1988.

MTCOT-205 (b)
Fault Tolerant Computing

Redundancy techniques, Fault Coverage, Computational integrity, Fault detection methods Fault identification algorithms, Exception handling, Damage assessment and confinement, System diagnosability, Diagnosis algorithms. System recovery and distribution. Reconfiguration techniques, Repairable Systems algorithms based fault tolerance testing techniques, Test scheduling, Test pattern generation, Fault tolerant computer communication networks. Fault tolerance of Software.

Books and References :
To be announced by the instructor.

MTCOT-205 (c)
Knowledge Discovery

This course will explore different machine learning, knowledge discovery and data mining approaches and techniques: Concepts Learning, Decision, Tree Learning, Clustering and instance based learning, Rule induction and inductive learning, Bayesian networks and causality, Neural networks, Genetic algorithms, Reinforcement learning, Analytical learning.

Books & References:

1. Heikki Mannila, Padhraic Smyth, Dvaid Hand. Principles of Data Mining. MIT Press 2001
2. T Hastie, R Tibshirani, J H Friedman. The Elements of Statistical Learning: Data Mining Inference, and Prediction, Springer Verlag, 2001
3. Jensen. F. An Introduction to Bayesian Networks. UCL Press, London 1996.
4. Pearl, J. Probabilistic Reasoning in Intelligent Systems: Networks of Plausible Inference. Morgan Kaufmann Publishers, San Mateo, CA, 1988.
5. Glymour, C., Cooper. G.(eds.) Computations: Causation & Discovery AAAI Press, The MIT Press, Menlo Park 1999
6. Pearl, J. Causality: Models, reasoning and Inference, Cambridge University Press 2000
7. Ian H Witten, Frank Eibe, Data Mining: Practical Machine Learning Tools and Techniques with Java Implementations, Morgan Kaufmann, 1999
8. Jaiwei Han, Micheline Kimber. Data Mining: Concepts and Techniques. Morgan Kaufmann, 2000

MTCOT-205 (d)
Object Oriented Software Modeling

Unified Modeling Language, (UML), Use case modeling , Methodologies for object oriented analysis and design (OOAD). Design patterns. CASE tool support for OOAD and automatic code generation. Precise modeling (using OCL-Object Constraint Language) and analysis of software models. Model driven architecture (MDA), Modeling language design meta modeling , UML Profiles, Advanced Modeling topics: Aspect oriented modeling, Modeling non functional properties, round-trip engineering, model based testing, open research questions.

Books and references:
To be announced by the instructor.

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

ACADEMIC CALENDAR SESSION 2008-2009

ODD SEMESTER

SR. NO.	ACTIVITY	PERIOD
1	Registration	16th to 18th July 2008 (Wednesday to Friday)
2	Classes commence	21.07.2008 (Monday)
3	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	28.07.2008 (Monday)
4	Mid-Semester Exams-I	28.08.2008 (Thursday) to 30.08.2008 (Saturday)
5	Mid-Semester Vacation	03.10.2008 (Friday) to 10.10.2008 (Friday)
6	Mid-Semester Exams-II	16.10.2008 (Thursday) to 18.10.2008 (Saturday)
7	Literati-2009	To be proposed by the Professor I/C Literati
8	Mid-Semester Exams-III	May be arranged by the respective teachers as per their convenience
9	End of Teaching	14.11.2008 (Friday)
10	End Semester Exams begin	24.11.2008 (Monday)
11	Winter Vacation	01.12.2008 (Monday) to 12.12.2008 (Friday)
12	Declaration of Result	By the end of December 2008

EVEN SEMESTER

SR. NO.	ACTIVITY	PERIOD
1	Registration	29th to 31st December 2008 (Monday to Wednesday)
2	Classes commence	01.01.2009 (Thursday)
3	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	05.01.2009 (Monday)
4	Convocation	First fortnight of January 2009
5	Mid-Semester Exams-I	05.02.2009 (Thursday) to 07.02.2009 (Saturday)
6	Athletic Meet	13.02.2009 (Friday) to 15.02.2009 (Sunday)
7	Confluence-2009	5th to 7th March 2009 (Thursday to Saturday)
8	Mid Semester Vacation	09.03.2009 (Monday) to 13.03.2009 (Friday)
9	Mid-Semester Exams-II	19.03.2009 (Thursday) to 21.03.2009 (Saturday)
10	Mid-Semester Exams-III	May be arranged by the respective teachers as per their convenience
11	End of Teaching	30.04.2009 (Thursday)
12	End Semester Exams begin	11.05.2009 (Monday)
13	Summer Vacation	25.05.2009 (Monday) to 03.07.2009 (Friday)
14	Practical Training Starts	27.05.2009 (Wednesday)
15	Declaration of Result	By the end of May 2009

GAZETTED HOLIDAYS

August 2008
15 Fri Independence Day

October
02 Thu Mahatma Gandhi's B'day
02 Thu Idu'l Fitr
09 Thu Dussehra
28 Tue Deepavali

November
13 Thu Guru Nanak's B'day

December
09 Tue Idu'l Zuha (Bakrid)
25 Thu Christmas Day

January 2009
07 Wed Muharram
26 Mon Republic Day

March
11 Wed Holi

April
03 Fri Ram Navami
10 Fri Good Friday

Dean (Academic)

No. Acad./2007/   Dated :

ACADEMIC CALENDAR (SESSION 2007-2008)

ODD SEMESTER JULY, 2007 to DECEMBER, 2007

1.	Registration	16th & 17th July 2007 (Monday & Tuesday)
2.	Classes begin	18.07.2007 (Wednesday)
3.	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	23.07.2007 (Monday)
4.	Mid-Semester Exam.-I	30.08.2007 (Thursday) to 01.09.2007 (Saturday)
5.	Mid-Semester Vacation	29.09.2007(Saturday) to 07.10.2007(Sunday)
6.	Mid-Semester Exam.-II	15.10.2007(Monday) to 17.10.2007(Wednesday)
7.	Mid-Semester Exam.-III	May be arranged by the teachers as per their convenience.
8.	End of Teaching	08.11.2007 (Thursday)
9.	Convocation	First fortnight of January 2008
10.	End Semester Exams. Begin	19.11.2007 (Monday)
11.	Winter Vacation	03.12.2007 (Monday) to 14.12.2007 (Friday)
12.	Showing of Answer book to students	17th & 18th December 2007 (Monday & Tuesday)
13.	Declaration of Result	20.12.2007 (Thursday)

EVEN SEMESTER DECEMBER, 2007 to MAY, 2008

1.	Registration	24th To 26th December 2007 (Monday To Wednesday)
2.	Classes begin	26.12.2007 (Wednesday)
3.	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	02.01.2008 (Wednesday)
4.	Athletic Meet	15.02.2008 (Friday) to 17.02.2008 (Sunday)
5.	Mid-Semester Exam.-I	11.02.2008 (Monday) to 13.02.2008 (Wednesday)
6.	Confluence-2008	7th to 9th March 2008 (Friday to Sunday)
7.	Mid Semester Vacation	23.02.2008 (Saturday) to 02.03.2008 (Sunday)
8.	Mid-Semester Exam.-II	13.03.2008 (Thursday) to 15.03.2008 (Saturday)
9.	Mid-Semester Exam.-III	May be arranged by the teachers as per their convenience.
10.	Literati-2008	To be proposed by the Professor-I/C, Literati.
11.	End of Teaching	25.04.2008 (Friday)
12.	End Semester Exams. begin	05.05.2008 (Monday)
13.	Showing of Answer book to students	15.05.2008 (Thursday) & 16.05.2008 (Friday)
14.	Summer Vacation	19.05.2008 (Monday) to 04.07.2008 (Friday)
15.	Practical Training Starts	21.05.2008 (Wednesday)
16.	B.Tech. Final year Result	19.05.2008 (Monday)

Dean (Academic)

Copy to:

1. DS to Director for the kind information of the Director
2. Dean (P&D)
3. Dean (Estate, Construction & Maintenance)
4. All Chairmen of the Departments
5. Proctor
6. Chief Warden
7. PTSW
8. Controller of Examinations
9. President Sports
10. Officer I/C (Clubs)
11. Prof. I/C (Academic Affairs)
12. Prof. I/C (Estate)
13. Prof. I/C (Literati)
14. Officer I/C (Literati)
15. Prof. I/C (Security & Cleanliness)

16. Registrar
17. Director of Sports
18. Librarian
19. Finance Officer
20. DR (CIA)
21. DR (A)
22. Stores Officer
23. DR (Academic)
24. A.R (Examination Cell)
25. Workshop Supdt.
26. Health Centre
27. All Notice Boards
28. MMCA's of All Hostel No. 1 to 5, PG and Girls Hostel

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copy to : HB, c. f 2, Faculty by email

1

No. Dean (Acad.)/2008/   Dated: 26.8.2008

The office bearers of the Non-Teaching Karamchari Sangh Association have requested to change the tenure of the summer vacation in the Academic Calendar Session 2008-09 as under:

Duration of summer vacation already shown in the Academic Calendar session 2008-09	Proposed duration of summer vacation
25.5.2009(Monday) to 3.7.2009 (Friday)	25.5.2009 (Monday) to 10.7.2009 (Friday)

An item to this effect may be placed in the coming SCSA/Senate meeting for consideration.

Dean (Academic)

DS (Acad.)

No. Gen.I/ 84 85   Dated 20/9/08

Subject: Establishment of Information Technology and Industrial
                  Engineering & Management Departments

                  Please refer to your letter no. CO/08/229 dated 14.07.2008
as well as CO/08/238 dated 17.07.2008 addressed to the Director with regard to
establishment / creation of Deptt. of Information Technology

                  The matter has been examined at length. According to
proviso to clause 15 of new MOA and rules of the Institute regarding creation
of new department, the new Department / Centre may be established /
abolished only on the recommendation of the Senate as well as prior approval
of the Central Government.

                  In view of the above, the Director has passed the orders that
the whole issue may be placed before the Senate in its next meeting for
according approval to the establishment of Deptt. of IT as well as Industrial
Engineering & Management, by the Academic Section.

                                                    Assistant Registrar (Gen.)
                                                    for Director

Chairman, Computer Engg Department

Copy to:

1   Dean, Academic
2   Chairman, Mechanical Engg. Department
3   Deputy Registrar, Academic
4   DS to Director for kind information to Director.
5   PA to Registrar for kind information to Registrar

No. BOS/ON/565

Dated: 31-03-2008

Minutes of the meeting of Board of Studies in Civil Engineering, NIT Kurukshetra, held on 29-03-2008, 11.00 AM onwards, in the Deptt. of Civil Engg., NIT Kurukshetra.

The following members were present:

1. Dr. V K Sehgal   (in Chair)
2. Prof. R K Bansal
3. Dr. V K Arora
4. Dr. R C Bhattacharjee
5. Dr. N K Gupta
6. Dr. S K Madan
7. Dr. S N Sachdeva
8. Prof. (Mrs.) Pratibha Aggarwal
9. Dr. Ashwani Jain   (Special Invitee)

The following decisions were taken:

1. The minutes of the last meeting held on 29-09-2007 (already circulated) were confirmed.

2. The list of Course Coordinators & Examiners for B.Tech. & M.Tech. Theory and Practical Examinations for the Even Semester of the Session 2007-08 was considered and approved.

3. It was decided that for evaluating answers sheets of the subjects where two batches are being run simultaneously, odd-numbered questions be evaluated by one examiner and even-numbered questions by the other examiner.

4. The list of Examiners for M.Tech. Dissertations in various specializations in Civil Engg. was considered and approved.

5. The application for registration to Ph.D. in Civil Engg of Sh. Rahul Kumar was considered and approved.

6. A panel of external examiners for evaluation of Ph.D. Thesis of Sh. V K Bansal was considered and approved.

7. The progress reports of already registered Ph.D. candidates were considered and approved.

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CET-302

8. The new syllabus for B.Tech. 6ᵗʰ Semester Course, CET-320, Design of Steel Structures - II, was considered and approved.

9. The new syllabus for M.Tech. Course, CET-613, Advanced RCC Design, was considered and approved.

10. The name of Dr. V K Garg, Reader, G.I.U, Hisar was considered and approved as Co-Supervisor for research scholar Sh. Manjeet Bansal. Dr. Diwan Singh, Professor, Civil Engg. Deptt., N I T Kurukshetra, is the Supervisor of the candidate.

The meeting ended with thanks to the Chair.

wsehgal
31-3-08
(V K Sehgal)
Professor & Chairman
Board of Studies in Civil Engg.
N I T Kurukshetra,
e-mail: vksehgalnith@rediffmail.com

To

1. All members of the Board of Studies in Civil Engg, NIT Kurukshetra.

2. Dean (Academic), NIT Kurukshetra, alongwith:

   (i) The new syllabus for B.Tech. 6ᵗʰ Semester Course, CET-320, Design of Steel Structures - II.
   (ii) The new syllabus for M.Tech. Course, CET-613, Advanced RCC Design.
   The Dean is requested to take these as agenda item in the next meeting of the Senate.
   (iii) The application of Ph.D. candidate Sh. Rahul Kumar.

3. Controller of Examinations, NIT Kurukshetra, alongwith:

   (i) A list of Course Coordinators & Examiners for B.Tech. & M.Tech. Theory and Practical Examinations for the Even Semester of the Session 2007-08.
   (ii) A list of Examiners for M.Tech. Dissertations in various Specializations in Civil Engg.
   (iii) Approved panel of external examiners for evaluation of Ph.D. Thesis of Sh. V K Bansal.

4. D.S. to Director (for kind information)

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B. Tech. VI Semester (Civil)
CET-302 DESIGN OF STEEL STRUCTURES-II

L T P/D Total
3 - 2 5

Course Credits: 4
Duration: 3 hrs

1. **Elementary Plastic Analysis and Design:**
Introduction, Scope of plastic analysis, ultimate load carrying capacity of tension members and compression members, flexural members, shape factor, mechanisms, plastic collapse, analysis, plastic analysis applied to steel beams and simple portal frames and design

2. **Unsymmetrical Bending:**
Introduction, Central Principal axes of a section, moments of Inertia about any set of rectangular axes, bending stresses and deflection.

3. **Roof Trusses:**
Types and Components of a roof truss, estimation of wind load, design of purlins with and without sag rods, lateral bracing, design of roof truss.

4. **Design of Water Tanks:**
Introduction, permissible stresses, design of circular, rectangular and pressed steel tanks including staging.

5. **Design of Steel Stacks:**
Introduction, various loads to be considered for the design of steel stacks, design of steel stacks including foundation.

6. **Beam Columns:**
Introduction, bending about one axis, bending about both axes, boundary constraints, design considerations.

7. **Cold Formed Sections:**
Introduction and brief description of various type of cold formed sections, local buckling, concepts of effective width and effective sections, elements with stiffeners, design of compression and bending elements.

Books:

1. Design of Steel Structures, A.S.Arya & J L Ajmani, Nem Chand & Bros., Roorkee.
2. Design of Steel Structures, P.Dayaratnam, Wheeler Pub. Allahabad
3. Design of Steel Structures, Gaylord & Gaylord, McGraw Hill, Newyork/International Students Edn., Toyo Kogakusha, Tokyo,
4. IS.800-1984, Indian Standard Code of Practice for General Construction in Steel.
5. IS-801 -1975, Indian Standard Code of Practice for Use of Cold formed light gauge steel structural members in general building construction.

B. Tech. VI Semester (Civil)
CET-302 DESIGN OF STEEL STRUCTURES-II

L   T   P/D   Toal
3   -   2   5

Course Credits: 4
Duration: 3 hrs

1. Elementary Plastic Analysis and Design:
   Introduction, Scope of plastic analysis, ultimate load carrying capacity of tension members and compression members, flexural members, shape factor, mechanisms, plastic collapse, analysis, plastic analysis applied to steel beams and simple portal frames and design.

2. Industrial Buildings:
   Loads, general arrangement and stability, design considerations, design of purlins, design of roof trusses, industrial building frames, bracings and stepped columns.

3. Design of Water Tanks:
   Introduction, permissible stresses, design of circular, rectangular and pressed steel tanks including staging.

4. Design of Steel Stacks:
   Introduction, various loads to be considered for the design of steel stacks, design of steel stacks including foundation.

5. Towers:
   Transmission line towers, microwave towers, Design loads, classification, design procedure and specification.

6. Cold Formed Sections:
   Introduction and brief description of various type of cold formed sections, local buckling, concepts of effective width and effective sections, elements with stiffeners, design of compression and bending elements.

Books:

1. Design of Steel Structures, A.S.Arya & J L Ajmani, Nem Chand & Bros., Roorkee.
2. Design of Steel Structures, P.Dayaratnam, Wheeler Pub. Allmabad
3. Design of Steel Structures, Gaylord & Gaylord, McGraw Hill. Newyork/International Students Edn., Toyo Kogakusha, Tokyo.
4. IS.800-1984, Indian Standard Code of Practice for General Construction in Steel.
5. IS-801 -1975, Indian Standard Code of Practice for Use of Cold formed light gauge steel structural members in general building construction.

CET 633 ADVANCED R.C.C. DESIGN

L T P/D Total
4 1 - 5

Course Credits: 4.5
Duration   3 hrs.

1. Yield Line Theory: Assumptions, location of yield lines, methods of analysis, analysis of one way and two way slabs.

2. Strip Method of Design of slabs: Theory, application to simply supported slab, slab fixed along edges and skew slabs.

3. Flat slabs: Limitations of Direct Design Method, shear in flat slabs, equivalent frame method, openings in flat slabs.

4. Ribbed slabs: Introduction, analysis for moments and shear, deflection, arrangement of reinforcement.

5. Design of Staircases: General design features of commonly used stair slabs and design of free standing staircases.

6. Approximate Analysis of grid floors: Analysis by Timoshenko's plate theory, stiffness method and equating joint deflections.

7. Redistribution of Moments in Beams: Conditions for moment redistribution, single span beams, multi-span beams and design of sections.

8. Deep Beams: Minimum thickness, design by IS-456, design as per British and American practice, beam with holes.

9. Spandrel Beams: Design principles; moment, shear and torsion in beams, design of section.

10. Slender columns and walls: Effective length, unbraced and braced columns, stability index, columns subjected to combined axial and biaxial bending, braced and unbraced walls, slenderness of walls, design of walls for vertical and in-plane horizontal forces.

11. Portal Frames: Design of a hinged frame; two storeyed portal and frame with fixed ends.

12. Shear walls: Classification of shear walls, classification according to behaviour and design of rectangular and flanged shear walls.

13. Computation of deflection and crack-width: Short term and long term deflection of Beams and slabs, calculation of deflection as per IS 456, factors affecting crackwidth in beams, calculation of crackwidth as per. IS 456, shrinkage and thermal cracking.

BOOKS:
1. Varghese, P.C. (2005),"Advanced Reinforced Concrete Design", Prentice Hall of India, New Delhi.

2. Jain, A.K. (2006), "Reinforced Concrete Limit State Design", Nem chand & Brns., Roorkee.

3. Krishna Raju (1986), "Advanced Reinforced Concrete Design", C.B.S. Publication, New Delhi.

4. Ferguson P.M., Breen .I.E. and Jinu J.O. (1988), Reinforced Concrete fundamentals", John wiley & sons, New York.

5. Gambhir, M.L. (2008), "Design of Reinforced Concrete Structure", Prentice Hall of India Pvt. Ltd. New Delhi.

CET 633 ADVANCED R.C.C. DESIGN

L T P/D Total

4 1 - 5

Course Credits: 4.5

Duration   3 hrs

1. Yield Line Theory: Assumptions, location of yield lines, methods of analysis, analysis of one way and two way slabs.

2. Strip Method of Design of slabs: Theory, application to simply supported slab, slab fixed along edges and skew slabs.

3. Flat slabs: Limitations of Direct Design Method, shear in flat slabs, equivalent frame method, openings in flat slabs.

4. Ribbed slabs: Introduction, analysis for moments and shear, deflection, arrangement of reinforcement.

5. Approximate Analysis of grid floors: Analysis by Timoshenko's plate theory, stiffness method and equating joint deflections.

6. Redistribution of Moments in Beams: Conditions for moment redistribution, single span beams, multi-span beams and design of sections.

7. Deep Beams: Minimum thickness, design by IS-456, design as per British and American practice, beam with holes.

8. Spandrel Beams: Design principles, moment, shear and torsion in beams, design of section.

9. Slender columns and walls: Effective length, unbraced and braced columns, stability index, columns subjected to combined axial and biaxial bending, braced and unbraced walls, slenderness of walls, design of walls for vertical and in-plane horizontal forces.

10. Shear walls: Classification of shear walls, classification according to behaviour and design of rectangular and flanged shear walls.

11. Cast-in-situ Beam- column Joints: Forces acting on joints, strength requirement of columns, anchorage, confinement of core, shear strength of joint, corner joint and procedure for design.

12. Computation of deflection and crack-width: Short term and long term deflection of Beams and slabs, calculation of deflection as per IS 456, factors affecting crackwidth in beams, calculation of crackwidth as per. IS 456, shrinkage and thermal cracking.

13. Inelastic Analysis of beams and Frames: Inelastic behaviour of reinforced concrete, stress-strain characteristics of concrete and steel, concept of plastic hinges, effect of shear on rotation capacity, inelastic analysis, allowable rotation for collapse load analysis and Baker's method of analysis.

BOOKS:
1. Varghese, P.C. (2001),"Advanced Reinforced Concrete Design", Prentice Hall of India, New Delhi.
2. Jain, A.K. (1999), "Reinforced Concrete Limit State Design", Nem chand & Brm., Rourkee.
3. Krishna Raju (1986), "Advanced Reinforced Concrete Design", C.B.S. Publication, New Delhi.
4. Ferguson P.M., Breen J.E. and Jirsa J.O. (1988), Reinforced Concrete fundamentals", John wiley & sons, New York.

15-JUL-08

CO/08/232

Two faculty members, namely, Dr. A. K. Singh & Dr. M. Dave, each have three scholars registered under them for PhD and one scholar is shared with some other supervisor. Hence, the number of scholars registered under one faculty member amounts to, theoretically, 3.5 Although, as per rules, each faculty member is entitled to register maximum four PhD scholars, due to the non-overlapping specializations and the interest of potential PhD scholars, the department is facing difficulty in getting any scholar that can be shared between two supervisors and can be counted as 0.5 with each supervisor. Thus, the minimum practically feasible increment is one that would enhance the total number of registered scholars to 4.5 under each faculty member. Therefore, keeping in view the under-utilization of research potential, above mentioned faculty members may be allowed to register one more scholar under them.

Chairman

Dean (Acad.)

CC: Prof. I/C Academic Affairs

73

4010   f.19/98

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA- 136 119

No. Dean (Acad.)/2008/

Dated 6.6.2008

As desired by Mentor, NPIU, some representatives of students are to be nominated on the Senate. It is proposed to nominate two students on the Senate from amongst the toppers of B.Tech 3rd and 4th Year.

Dean (Academic) 6/6/08

Director.

This matter may be placed before the Senate.

DR

AN 9/6

Dean (Acad.)   DR (Acad.)

For Senate   9/6/08   74

Ref. No. MCA/08/   Dated: 02/09/2008

Sub: Scheme and Syllabi of MCA 3rd and 4th Semester

The scheme and syllabi of the MCA 3rd and 4th semester was approved in the Board of Studies meeting held on May 22nd, 2008. The approved scheme and syllabi is attached along with. It is therefore requested you to kindly consider the same in the next SCSA/ Senate meeting, please.

(R. S. Bhatia)
Chairman

Dean (Academic)

MCA - III SEMESTER

SCHEME AND SYLLABI
MASTER OF COMPUTER APPLICATIONS
NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA
(2008-09)

SEMESTER – III

SUBJECT CODE	COURSE TITLE	LECTURE hrs	LAB hrs	CREDITS
MCA 201	Database Management System	4	0	4
MCA 203	Software Engineering	4	0	4
MCA 205	Computer Networks	4	0	4
MCA 207	Visual Programming	4	0	4
MCA 209	Web Engineering	4	0	4
MCA 211	Database System (Pr.)	0	2	1
MCA 213	Visual Programming (Pr.)	0	2	1
MCA 215	Web Engineering(Pr.)	0	2	1
MCA 217	SEMINAR	1	0	1
		Total Credits		24

MCA-201 Database Management System

L T P Total
4 0 0 4

Credits-4
Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

Basic Concepts

What is database system, why database, Data independence, 3 levels of architecture; external level, conceptual level, internal level, mapping DBA, DBMS, organization of databases, components of DBMS, Data Models, Relational Models, Networks data model, Hierarchical Model, semantic data model.

Relational Model

Introduction – Relational Model, base tables & views, relations, domains, candidate keys, primary key, alternate keys, foreign key, Integrity rules, relational Operators – relational algebra, relational calculus, Data Base Design – Introduction, Basic Definitions, Non-loss decomposition and functional dependencies, 1NF, 2NF, 3NF, BCNF, MVD & 4NF, JD & 5NF, Normalization procedure, other normal forms.

SQL: Data definition, Constraints, & Schema Changes in SQL, insert, Delete and update statements, View in SQL, Specifying constraints and Indexes in SQL, Queries in SQL.

A relational database management system: Oracle-A historical perspective, Basic structure, Data base Structure and its manipulation in Oracle, Storage Organization in Oracle Programming Oracle Applications.

Concurrency

Transaction concept, transaction state, concurrent executions, serializability lock based protocols, timestamp based protocols, validation based protocols, deadlock handling.

Distributed Data Bases

Introduction, fundamental principles, objectives, Problems of distributed processing query processing, catalog management, updates propagation, recovery control, and concurrency control.

Suggested References

1. C.J. Date: An Introduction to Database systems 7th Ed. Addison Wesley, Indian Edition, 2000.
2. A.K. Majumdar and Bhattacharyya: Database Management Systems, THM, 1996.
3. A Silberschatz, H.F. Korth & S. Sudarshan: Data Base System Concepts, TMH, 1997.
4. S. B. Navathe, R. Elmasri: Fundamentals of database

MCA-203 Software Engineering

L T P Total
4 0 0 4

Credits-4
Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

Introduction
Introduction to Software crisis & Software processes; Software life cycle models – Build & Fix, waterfall prototype evolutionary, spiral model.

Requirement Analysis & Specifications
Problem Analysis – DFD, Data dictionaries. ER diagrams, object diagrams; approaches to problems analysis; SRS; specifying behavioural & non-behavioural requirements.

Software Design
What is design? Modularity, strategy of design, function oriented design, object oriented design.

Software Metrics
Introduction, size metrics, data structure metrics, information flow metrics, entropy-based measures, metric analysis.

Software Reliability
Importance, Software reliability & Hardware reliability, failures & faults, reliability concepts, reliability models – macro, basic, logarithmic Poisson, calendar time component, micro models; estimating number of residual errors; reliability allocation.

Software Testing
Introduction, Functional testing, structural testing, activities during testing, debugging, testing tools.

Software Maintenance
Introduction, types of maintenance, maintenance process, maintenance models, reverse engineering, re-engineering.

Suggested References
1. K.K.Aggarwal, Yogesh Singh: Software Engineering, New Age International Ltd, 2001.
2. R.S. Pressman, Software Engineering – A Practitioner's Approach, 5th Ed, TMH, 2000.
3. Ian Sommerville, Software Engineering, 4th Ed., Addison Wesley.

MCA - III SEMESTER

MCA-205   Computer Networks

L T P Total

4 0 0 4

Credits-4

Duration of Exam- Three hours

During Semester Evaluation Weightage- 40%

End Semester   Examination Weightage- 60%

Introduction

Network Functions, Network Topology, Network Services, Switching Approaches, Transmission media and systems, multiplexing and signaling techniques, Error detection and correction, ISDN and BISDN.

Layered Architectures

Examples, OSI Reference Model, Overview of TCP/IP architecture, Socket system calls, SNMP, Electronic Mail.

Peer-to-Peer Protocols

Protocols, Service Models and End-to-End requirements, ARQ, Sliding Window, RTP, HDLC, PPP protocols, Statistical Multiplexing.

MAC and LAN Protocols

Multiple access communication, Random Access-ALOHA, Slotted-ALOHA, CSMA, CSMA-CD, Channelization – FDMA, TDMA, CDMA, Channelization in Cellular networks LAN Standards - 802.3, 802.4, 802.5, 802.6, FDDI, 802.11, LAN Bridges.

Packet Switching Networks

Packet network topology, Datagrams and Virtual Circuits – Structure of Switch / Router, Connectionless and Virtual Circuit packet Switching, X.25, Routing Algorithms, ATM Networks, Traffic management and QoS – FIFO, Priority Queues, Fair Queuing, Congestion Control techniques.

TCP/IP

Architecture, Internet protocols – IP packet, Addressing, Subnet addressing, IP routing, CIDR, ARP, RARP, ICMP, Reassembly, IPv6, UDP, Transmission Control Protocol – TCP, Reliable stream service, operation, protocol, DHCP, Mobile IP, Internet Routing protocols, Multicast Routing.

Suggested References

1. Leon Garcia and Indra Widjaja: Communication Networks – Fundamental Concepts and Key Architectures, TMH, 2000.
2. A.S. Tanenbaum: Computer Networks, 3/e, PHI, 1997.
3. Forouzan, Coombs and Fegan: Introduction to Data Communications and Networks, TMH, 1999.
4. William Stallings: Data and Computer Communications 5/e, PHI.

MCA-207   Visual Programming

Visual Basic

Concepts of Object based Event Oriented Languages; Visual Architecture: Method, Statement, Properties and Events; Basic concept of Visual Program Design and comparison with Non-Visuals.

The VB Integrated Development Environment, VB language and its elements: Variables, constants, arrays, collections, subroutines, functions, arguments, and control structures.

Designing a VB application: Working with VB forms and managing forms at run time, coding event procedures, implementing drag and drop operations, menu designing.

Coding a VB application: Implementing user interface controls, common controls and their properties, dynamic controls, custom controls, control arrays, using variables, subroutines, function and control structures, accessing data through code and data controls, using DLLs in VB applications, building ActiveX clients, ActiveX servers, ActiveX controls, ActiveX documents, and web-enabled applications, Multiple Document Interface. Database programming (DAODC, ADODC)

Visual C++

Windows basic concepts, window API, DEF files, creating windows, message, Mouse and keyboard. Introduction to resources, designing and creating menus, pop-up menus, user defined resources. Bitmaps and dialogues; windows animation; font basics; window controls; font display; static controls, edit controls, list boxes.

Overview and structure of windows programming, coding conventions:
Programming using visual C++

Suggested References

1. Visual Basic – 6 by Howard Hawee PHI
2. Teach yourself Visual Basic by Warner TMH
3. Mastering VB – 6 by Evangelos Petroutsos TMH
4. Programming in VB – 6 by J C Bradley TMH
5. VB – 6 The Complete Reference by Jerks TMH
6. Windows Programming by Charles Petzol
7. Windows Programming by Jim Conger.
8. Visual C++ by Yashwant Kanetkar.

MCA 209 Web Engineering

Credits-4

L T P Total
4 0 0 4

Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

UNIT I

HTML Basic Concepts, Good Web Design, Process of Web Publishing, Phases of Web Site development, Structure of HTML documents, HTML Elements – Core attributes, Language attributes, Core Events, Block Level Events, Text Level Events, Linking Basics, Linking in HTML, Images and Anchors, Anchor Attributes, Image Maps, Semantic Linking Meta Information, Image Preliminaries, Image Download Issues, Images as Buttons, Introduction to Layout: Backgrounds, Colors and Text, Fonts, Layout with Tables. Advanced Layout: Frames and Layers, HTML and other media types. Audio Support in Browsers, Video Support, Other binary Formats. Style Sheets, Positioning with Style sheets. Basic Interactivity and HTML: FORMS, Form Control, New and emerging Form Elements.

C#.NET — Variables, Operators and Expressions, Writing Methods and Applying Scope, Decision statements, Iteration statements, Managing errors and Exceptions values and references, Value types with enumerations and Structures, Arrays and Collections parameter arrays, Inheritance, Garbage collection and Resource management.

Introducing ASP.NET — Understanding validation controls — Accessing Data with web forms — Building ASP.NET applications Building XML web service, handling XML.

Suggested References

1. Jeff Prosise, Programming Microsoft .NET, Microsoft Press
2. Thomas A Powell, HTML The Complete Reference, Tata McGraw Hill Publications.
3. Doug Tidwell, James Snell, Pavel Kulchenko, Programming Web Services with SOAP, O' Reilly
4. Jesse Liberty, Programming C#, 3rd Edition, O'Reilly & Associates
5. Jesse Liberty, Dan Hurwitz, Programming ASP.NET, O'Reilly & Associates

SCHEME AND SYLLABI
MASTER OF COMPUTER APPLICATIONS
NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA
(2008-09)

SEMESTER – IV

SUBJECT CODE	COURSE TITLE	LECTURE hrs	LAB hrs	CREDITS
MCA 202	Server Side Computing with Java	4	0	4
MCA 204	Linux and Shell Programming	4	0	4
MCA 206	System Programming	4	0	4
MCA 208	Elective-I	4	0	4
MCA 210	Elective-II	4	0	4
MCA 212	Server Side Computing Lab (Pr.)	0	2	1
MCA 214	Unix Programming (Pr.)	0	2	1
MCA 216	Mini Project	0	2	1
MCA 218	SEMINAR	1	0	1
		Total Credits		24

List of Electives

MCA 220 Data Warehousing and Data Mining
MCA 222 System Security and Cryptography
MCA 224 E-Governance
MCA 226 E-Commerce

MCA-202 Server Side Computing with Java

Credits-4

L T P Total
4 0 0 4

Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

An overview of Java: - Java features how java differs from C & C++, data types, constants & variables, operators & expressions, control structure in java, classes, objects & methods, arrays, strings & vectors introduction to Java Design patterns.

Interfaces & Packages: - Defining, extending, implementing interfaces, accessing interface variables, Packages: - Introduction using system package, accessing a package, using a package, adding a class to a package & hiding classes, Introduction to multithread programming.

Architecture of Web Server: tomcat, Introduction to servlet, Life cycle of a servlet, Action and filter servlet, Java Server Pages, RMI, Java persistence, Java Server Faces

Applet Programming: - Applet fundamentals, life cycle of applet, creating an executable applet, applet tags, running the applet & passing parameters to applet.

Suggested References

1.	Ivor Horton	1.Beginning Java 2 – JDK 5 Edition, Wiley-India
2.	Mark Grand	Patterns in Java Vol. 1-3, Wiley-India
3.	Steve Holzner	Java 2 (JDK 5 Edition) Black Book Wiley-India
4.	B. Eckel	Thinking in JAVA, Pearson Education.
5.	Deitel & Deitel	How to Program JAVA. Pearson Education.

MCA-204 Linux and Shell Programming

Credits-4

L T P Total

4 0 0 4

Duration of Exam- Three hours

During Semester Evaluation Weightage- 40%

End Semester Examination Weightage- 60%

1. Linux Startup

User accounts, accessing linux – starting and shutting processes, Logging in and Logging out, Command line, simple commands

2. Shell Programming

Unix file system: Linux/Unix files, inodes and structure and file system related commands, Shell as command processor, shell variables, creating command substitution, scripts, functions, conditionals, loops, customizing environment

3. Regular Expressions and Filters

Introducing regular expressions patterns, syntax, character classes, quantifiers, introduction to egrep, sed, programming with awk and perl

4. The C Environment

The C compiler, vi editor, compiler options, managing projects, memory management, use of makefiles, dependency calculations, memory management – dynamic and static memory, building and using static and dynamic libraries, using ldd, soname, dynamic loader, debugging with gdb

5. Processes in Linux

Processes, starting and stopping processes, initialization processes, rc and init files, job control – at, batch, cron, time, network files, security, privileges, authentication, password administration, archiving, Signals and signal handlers, Linux I/O system

Suggested References

1. John Goerzen: Linux Programming Bible, IDG Books, and New Delhi, 2000.
2. Sumitabha Das: Your Unix – The Ultimate Guide, TMH, 2000.
3. Mathew: Professional Linux Programming, vol. 1 & 2, Wrox-Shroff, 2001.
4. Welsh & Kaufmann: Running Linux, O'Reiley & Associates, 2000.

MCA-206 System Programming

Credits-4

L	T	P	Total
4	0	0	4

Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

INTRODUCTION

Language Processing - Its activities, Fundamentals of Language Processing Development Tools, System Software and Machine Architecture, Hypothetical Computer.

ASSEMBLER AND MACRO PROCESSORS

Basic Assembler functions, Machine-dependent and Machine-independent Assembler features, Assembler Design options, Implementation Examples, Basic Macro Processor functions - Machine- independent Macro Processor features, Design options and Examples.

LOADERS AND LINKERS

Basic Loader Functions, Machine-dependent and Machine-independent Loader features, Design options. Linkage Editors, Dynamic Linking and Bootstrap Loaders. Implementation Examples, MS-DOS linker, SUN-OS linkers and Cray MPP linker.

COMPILERS AND SOFTWARE TOOLS

Compiler Structure, Phases of Compiler, Comparison of Compilers and Interpreters, Software Tools, Tools for Programming Development, Editors, Debug monitors Programming Environments, User Interfaces.

Suggested References
1.Leland L. Beck," System Software — An Introduction to Systems Programming", 3rd Edition, 1999, Addison Wesley.
2. D.M.Dhamdhare, "Systems Programming and Operating Systems", 2 Edition, 1997, TMH.

3. Donovan J.J. "Systems Programming", 1972, McGraw Hill.

MCA 220 Data Warehousing and Data Mining

L T P Total
4 0 0 4

Credits-4
Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

INTRODUCTION
Data Mining-motivation, importance-DM Functionalities, Basic Data Mining Tasks, DM Vs KDD, DM Metrics, DM Applications, Social implications.

DATA WAREHOUSING
Difference between Operational Database and Data warehouse-Multidimensional Data Model: From tables to data Cubes, Schemas, Measures-DW Architecture: Steps for design and construction of DW, 3-tier DW Architecture-DW Implementation: Efficient computation of DATA Cubes, Efficient Processing of OLAP queries, Metadata repository.

DATA PREPROCESSING, DATA MINING PRIMITIVES, LANGUAGES
Data cleaning, Data Integration and Transformation, Data Reduction. Discretization and concept Hierarchy Generation. Task-relevant data, Background Knowledge, Presentation and Visualization of Discovered Patterns. Data Mining Query Language-other languages for data mining

DATA MINING ALGORITHMS
Association Rule Mining: MBA Analysis, The Apriori Algorithm, Improving the efficiency of Apriori. Mining Multidimensional Association rules from RDBMS and DXV. Classification and Predication: Decision Tree, Bayesian Classification back propagation, Cluster Analysis: Partitioning Methods, Hierarchical Method, Grid-based methods, Outlier Analysis.

WEB, TEMPORAL AND SPATIAL DATA MINING
Web content Mining, Web Structure Mining, Web usage mining. Spatial Mining: Spatial DM primitives, Generalization and Specialization, Spatial rules, spatial classification and clustering algorithms. Temporal Mining: Modeling Temporal Events, Times series, Pattern Detection, Sequences.

Suggested References
1.Jiawei I-lan, & Micheline kamber,"data mining: Concepts and Techniques" Harcourt India Private Limited, First Indian Reprint,2001
2.Margaret H.Dunham,"Data Mining: Introductory and Advanced Topics". Pearson Education,First Indian Reprint,2003
3.Arun K. Pujari," Data Mining Techniques", University Press (India) Limited, First Edition,2001

MCA - IV SEMESTER
MCA 222 System Securities and Cryptography

L T P Total
4 0 0 4

Credits-4
Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

Basic Encryption and Decryption
Attackers and Types of threats, challenges for information security, Encryption Techniques, Classical Cryptographic Algorithms: Monoalphabetic Substitutions such as the Casers Cipher, Cryptanalysis of Monoalphabetic ciphers, Polyalphabetic Ciphers such as Vigenere ; Vernam Cipher, Stream and Block Cipher

Number Theory
Prime Numbers, Greatest Common Divisor, Euclidean algorithm, Modular Arithmetic, Properties of Modular Arithmetic, Computing the inverse, Fermat's Theorem, algorithm for computing inverses, Random number generation

Secret key Systems
The Data Encryption Standard(DES), Analyzing and Strengthening of DES, Introduction to Advance Encryption Standard (AES)

Key Management Protocols
Solving Key Distribution Problem, Diffie-Hellman Algorithm, Key Exchange with Public Key Cryptography

Public Key Encryption Systems
Public key Encryption, Rivets- Shamir- Adlman (RSA) Cryptosystem, elliptic curve cryptography, Rabin, ElGamal, Goldwasses- Micali , Blum-Goldwasser cryptosystem, The Digital Signature Standard (DSA), Security handshake pitfalls, Strong password protocols.

Hash Algorithms
Hash concept, description of Hash algorithms, Message Digest Algorithms such as MD4 and MD5, Secure Hash Algorithms such as SH1 and SHA2

Public Key Infrastructure (PKI)

Concept of digital Certificate, Certificate Authorities and its roles, X.509 Structure of Digital Certificate, Types of public key infrastructures

Introduction to Network Security

Network security Issues such as Impersonation, Message Confidentiality, Message Integrity, Code Integrity, Denial of Service, Securing Switches and Routers, Firewalls, DMZs, Virtual Private Networks, Network Monitoring and Diagnostic Devices, Virtual LANs, IPSec Secure Communication Mechanism, PKI based Authentication and Kerberos

Introduction to Web Security

Secure socket Layer protocol, Secure Electronic Transaction Protocol, Safe Guarding Web Servers, Secure Electronic Mail, Enhanced Email, Pretty Good Privacy, Public Key Cryptography Standards, Secure, SMIME

Suggested References

1. A.J. Menezes .P. VAN OORSCHOT AND S. VANSTONE, "Handbook of Applied Cryptography", CRC Press
2. Principles of Cryptography, William Stallings, Pearson Education
3. Cryptography & Network Security, Atul Kahate, TMH

MCA 224 E-Governance

L T P Total
4 0 0 4

Credits-4
Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

E-government, need of e-governance, e-assistance, e-democracy, e-administration, citizen services, e-procurement, Mobile government

Law and policies, IT Act, Right for Information Act, Introduction to various Tax Payable, Purchase and Tender procedures and E-filing of Information, Concepts of E-portals

E-governance implementations: Software and Hardware required for E-governance Implementation , E-governance in a Small Office, E-governance for public utilities, E-governance in a medium enterprise, E-governance and finance, E- Tender and Web E-governance efforts of State Government in India

Detailed study of domestic and one international sample of E-governance system, E-governance model of Haryana, Implementation of one E-governance model in .NET/ Enterprise Java

Suggested References
1. 'Professional Office Procedure' By Susan H Cooperman, Prentice Hall
2. 'Public Information Technology and E-governance : Managing the virtual state' (paperback) By G.David Garson

MCA - IV SEMESTER

MCA 226 E-Commerce

L T P Total
4 0 0 4

Credits-4
Duration of Exam- Three hours
During Semester Evaluation Weightage- 40%
End Semester Examination Weightage- 60%

Web commerce concepts - electronic commerce environment - electronic marketplace technologies - web based tools for e-commerce - e-commerce softwares - hosting services and packages - modes of e-commerce - EDI - commerce with WWW/ internet

Security issues - threats to e-commerce - approaches to safe e-commerce - secure transactions and protocols - intruder approaches - security strategies and tools - encryption - security teams - protecting e-commerce assets - protecting client machines - servers and channels - transaction integrity

Electronic payment systems - types of e-payment - internet monetary payment and security requirements - payment and purchase order process - electronic cash - electronic wallets - smart cards - credit and charge cards - risks - design of e-payment systems

Strategies for marketing - creating web presence - identifying and reaching customers - web branding - sales on the web - strategies for purchasing and support activities - EDI - supply chain management - softwares for purchasing - strategies for web auctions - virtual communities and web portals - international - legal - ethical and tax issues - planning and managing e-commerce projects.

Implementation of sample E-Commerce model in .NET/ Enterprise Java

Suggested References

1. Kalakota R. & Whinston A.B., "Frontiers of Electronic Commerce", Addison-Wesley, New Delhi
2. Schneider G. P. & Perry J. T., Electronic Commerce, Course Technology, Cambridge
3. Westland J. C. & Clark T.H. K., "Global Electronic Commerce", University Press, 2001.
4. Minoli D. & Minoli E., "Web Commerce Technology Handbook", Tata McGraw Hill, New Delhi
5. Treese G.W. & Stewart L. C., "Designing Systems for Internet Commerce", Addison Wesley, New Delhi

No. Acad./19ᵗʰ SCSA/ 105 13 - 27

Dated 22.10.2008
19/11/08

Minutes of the 19ᵗʰ SCSA meeting held on 14ᵗʰ October, 2008 at 4.35 PM in the Board Room of the Institute

The following were present:-

1.	Dr. M.N.Bandyopadhyay, Director	In Chair
2.	Sh. R.P.S Lohchab, Registrar	Member-Secretary, Senate
3.	Prof. R.K.Bansal, Dean (Academic)	
4.	Dr. S.P Jain, Dean (P&D)	
6.	Dr. V.K.Sehgal, Chairman, Civil Engg. Deptt.	
7.	Dr. S.K Sharma, Dean (Estate, Const & Elect. Mtc.)	
7.	Dr. K.S.Kasana, Chairman, Mech. Engg. Deptt.	
8.	Dr. Brahmjit Singh, Chairman, ECE Deptt.	
10	Dr. K.S Sandhu, Officiating Chairman, Elect. Engg. Deptt.	
10.	Dr. R.K Deswal, Controller of Exams.	
11.	Dr. P.J Philip, Chairman, Hum. & Social Scs Deptt.	
13.	Dr. R.S.Bhatia, Chairman, Computer Applications Deptt.	
14.	Dr. A.K Singh, Chairman, Computer Engg. Deptt.	
15.	Dr. D.P Singh, Chairman, Chemistry Department	
16.	Dr. Baldev Setia, Professor Incharge, Acad Affairs & Senate	

The following decisions were taken:

1. To review the practice of allowing re-evaluation of answer scripts to the students

As a prelude to the item, Professor I/C (Academic Affairs and Senate) apprised the members of the background for having to review the system of allowing re-evaluation of answer scripts of the students. Apart from the request put forth by a large number of students, similar observation to this effect had earlier been made by Prof. A.N Jha, Auditor, TEQIP during his last visit to the Institute. The item was discussed at length and finally it was decided to revert to the system of showing answer scripts to the students to be effective for the Nov- Dec 2008 examination onwards.
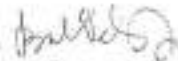
2. Any other item

On September 25ᵗʰ, 2008, 12 student representatives: 2 from B Tech second year, 4 from third year and 6 from the final year had had a meeting with Dean (Academic), Professor I/C (Academic Affairs & Senate) Chief Warden and DR(Academic). They had put forth some requests/problems and the same were read out before the SCSA by Professor I/C (Academic Affairs & Senate). On request, the Chair permitted discussion on the decision adopted earlier that, "All the B Tech students will be allowed to appear in the Odd Semester examination for Odd Semesters and Even Semester for Even Semester courses for improvement of internal assessment and end semester examinations with effect from the academic

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session 2008-09 except the students of B.Tech 6th Semester. The B.Tech 8th Semester students will be allowed to appear in both Odd and Even Semester examinations. "(This had been taken up in accordance with the recommendations of the Committee comprising of Dr. T.K Garg, Dr. Brahmjit Singh and Dr. Kuldeep Kumar constituted for abolishing the Block System, the report of which had been considered during the 15th meeting of the Standing Committee on Senate Affairs held on 4.3.2008.")

The matter was deliberated upon and decided that the students should be allowed to appear in supplementary examinations in Odd Semester for Odd Semester courses and in Even Semester for Even Semester courses.

Also, it was decided that in order to involve students in the decision making process of administration, a system of students' representatives by nomination may be formed. While discussing the modalities, it was agreed upon that the Chairpersons of 7 Engineering Departments would nominate 3 students, one each from second, third and final year and 4 more students from first year would be nominated by the Dean (Academic). This team of 25 students would bring forward the requests/problems of the students to the authorities in scheduled/arranged meetings.
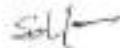
The meeting ended with a vote of thanks to the Chair.

(BALDEV SETIA)
Professor I/C (Acad. Affairs & Senate)

Approved

(M.N BANDYOPADHYAY)
Director and Chairman, Senate

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NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136 119

No. SCSA/19th/

Dated: 10.10.2008

The Director has desired to convene a meeting on 15.10.2008 at 4.35 P.M. in the Board Room of the Institute of all the students who had met the Dean (Academic), Professor I/C (Academic Affairs and Senate) and Chief Warden on 25.9.2008 concerning the problems put forthwith by the students relating to their academic and boarding environment. The following are requested to kindly make it convenient to attend the same.

1. Dean (Academic)
2. PTSW
3. Proctor
3. Controller of Exams
4. Chief Warden
5. Registrar

(Baldev Setia)
Professor Incharge Academic Affairs

All concerned

Copy to: Deputy Registrar (Academic) with the request to make the arrangement for seating of the above mentioned Officers and about 35 students in the Board Room.

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136 119

Dated: 10.10.2008

The Director has desired to convene a meeting on 15.10.2008 at 4.35 P.M in the Board Room of the Institute of all the students who had met the Dean (Academic), Professor I/C (Academic Affairs and Senate) and Chief Warden on 25.9.2008 concerning the problems put forthwith by the students relating to their academic and boarding environment.

The students, if they so desire, may include 1-2 additional students from each year with prior information to the undersigned.

10.10.2008
(Baldev Setia)
Professor Incharge Academic Affairs

All concerned

S.No.	Roll No.	Name	Year
1	107516	Praveen Khanghta	2nd
2	107228	Animesh Pandey	2nd
3	1240/06	Yatin Katyal	3rd
4	1253/06	Sahil Dureja	3rd
5	1289/06	Akshat Kanchan	3rd
6	1638/06	Deeksha Aneja	3rd
7	62/05	Ved Prakash	4th
8	64/05	Deepak Gro	4th
9	161/05	Lalit Narayan Mandal	4th
10	187/05	Rohit Singh	4th
11	261/05	Anoop Tripathi	4th
12.	304/05	Chetan Awasthi	4th

No. Acad./20ᵗʰ SCSA / 6312—21   Dated 04.11.2008
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Minutes of the 20ᵗʰ SCSA meeting held on 31ˢᵗ October, 2008 at 4.35 PM in the
Board Room of the Institute

The following were present -

In Chair

1.   Dr. M.N. Bandyopadhyay, Director
2.   Prof. R.K. Bansal, Dean (Academic)
3.   Dr. T.K. Garg, Prof. MED
4.   Dr. S.P. Jain, Dean (P&D)
5.   Dr. V.K. Sehgal, Chairman, Civil Engg. Deptt.
6.   Dr. S.K. Sharma, Dean (Estate, Const & Elect. Mtc.)
7.   Dr. A. Swarup, Chairman, Elect. Engg. Deptt.
8.   Dr. S.K. Chakarvarti, Chairman Physics Deptt.
9.   Dr. Kuldeep Kumar, Chairman, Mathematics, Deptt.
10. Dr. Brahmjit Singh, Chairman, ECE Deptt.
11. Dr. R.K. Deswal, Controller of Exams.
12. Dr. P.J Philip, Chairman, Hum. & Social Scs Deptt.
13. Dr. S.S. Rattan, Officiating, Chairman, Mech. Engg. Deptt.
14. Dr. R.S. Bhatia, Chairman, Computer Applications Deptt.
15. Dr. A.K. Singh, Chairman, Computer Engg. Deptt.
16. Dr. D.P Singh, Chairman, Chemistry Department
17. Dr. Baldev Setia, Professor Incharge, Acad.Affairs & Senate

The following decisions were taken:

1.   To apprise the members of the salient points of the meeting of Dean
(Academic) and others with the students and to consider the case of
conducting odd and even semester exams together.

At the outset, Dr. Baldev Setia, Professor I/C (Academic Affairs & Senate)
apprised the SCSA members of the salient points of the meeting of the Dean
(Academic) and others with the students held on 15.10.2008. The item under
consideration was deliberated upon in light of the above-mentioned meeting and
the written representation on behalf of the students. It was decided that as a one
time measure, the B.Tech. students may be allowed to appear both for odd and
even semester exams together during the exams to be held in December, 2008
only.

During the meeting mentioned above, the students had submitted a draft
constitution of student representatives which was placed before the members. It
was decided to put this document for consummation of all i.e. faculty, students

and administration through senate committee

Suggestions-modifications in the constitution of Student representatives may be invited in writing (including e-mail). If required, a meeting may be held with the students. This will help in arriving at a consensus for constitution of student representative body.

2. To consider the request of the B. Tech students (old) for granting mercy chance for appearing in their remaining papers

The request of two B.Tech students (old) namely Sh. Hemant Tantram, Roll No. 2K-112 and Sh. Sinoj Gopi, Roll No. 2K-129 for granting mercy chance for appearing in their remaining papers was rejected by the SCSA.

3. Any other item with the permission of the Chair

Written request from about 36 B.Tech. (First year) students who had been admitted late for arranging extra classes was put before the SCSA for consideration.

The matter was discussed and it was decided that the Chairmen of various departments would arrange for extra classes for one week for the students who had been admitted late after the first regular counselling (i.e. during the second and third counselling) w.e.f. 15.11.2008. The first year students who have appeared in only one test because of late admission are to be allowed to appear in one more test at a suitable date to be decided by concerned teacher.

In view of this arrangement, the end semester examinations scheduled to start from 24.11.2008 shall stand postponed by one week.

The meeting ended with a vote of thanks to the Chair.

(BALDEV SETIA)
Professor I/C (Acad. Affairs & Senate)

Director

The Director
NIT Kurukshetra

23/10/2008

Hemant Tumram
Roll no 2k-112
B.Tech Mechanical Engg.

SUB: REQUEST FOR MERCY CHANCE

Respected Sir,

I am Hemant Tumram a student of mechanical Engg. 2000-04 batch; roll no 2k-112. I have been trying hard to clear my papers and unfortunately I have run out of chances to do so. I am very determined to clear my only remaining paper which would complete my degree.

My weak financial background forced me to take up a job immediately after four years of college education, because of which I could not devote my full attention towards obtaining the degree. I am the sole breadwinner for my family at this point of time and it is very unfortunate that one paper would deny me a chance to obtain my degree and hence a secured life. This one chance could mean a lot to me as I would remain only a 12th pass even after completing my degree with the exception of just one paper. The amount of hard work that I have put in all these years and my family's prayers all along would count for nothing if I do not graduate. Also I have not used a mercy chance till now and I am sure that this one chance is all that I need for the security of my family. The college has always shown leniency towards its students and have given many students mercy chances in their last attempts to obtain a degree and I request you to grant me also a chance for the same. I have only **one paper remaining in my fourth semester i.e. MAE-202**

I hope you consider my case with heartfelt leniency as you would towards a student and a son. I and my family would be grateful to you throughout my life for giving me this one opportunity. I also promise you that I will do my best and work hard with full devotion this time to clear this one remaining paper.

Yours Truly,

Hemant Tumram
Roll no 2k-112
B.Tech Mechanical Engg.

Mob. No. 09322156069

MAHARASHTRA.   97

The Director
NIT Kurukshetra

23/10/2008

Sinoj Gopi
Roll No: 2k-120
B.Tech, Mechanical Engg.
NIT Kurukshetra
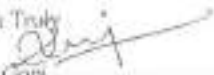
SUB: REQUEST FOR MERCY CHANCE

Respected Sir,

I Sinoj Gopi (Roll No: 2k-120), am a student of B.Tech, Mechanical Engg, 2000-04 batch. I have been regularly trying to clear my papers over the course of time which would show you my level of desire in obtaining this degree. But unfortunately I have run out of chances in my attempts to do so. I sincerely request you to grant me a mercy chance as I have only four subjects remaining to complete my degree requirements. It is also to be noted that I have not used my mercy chance at any point of time till now.

I am sure that I would be able to clear my four remaining papers by working very hard towards achieving that goal of mine. I would be grateful if you could give me a chance to do the same by granting me a mercy chance.

Please consider this heartfelt request as eight years of my life spent in obtaining this degree would count to nothing if I am denied a chance to write the four remaining papers this time. Also my family background and financial status would make it all the more difficult for me to continue without this degree.

Yours Truly

Sinoj Gopi
2k-120
B.Tech Mechanical Engg

Contact no: 9896829975

PROPOSAL REGARDING CHANGES IN ACADEMIC RULES

As per discussion held in the meeting on 13th Oct, 2008 between faculty and students, a number of problems were presented by the students related to the rule that a student can give the supplementary examination in even semester for the course taught in an even semester and same for the odd semester. Some of the issues faced were :

- A student having a backlog in the 4th semester will not be eligible to appear for placements as he/she is allowed to sit for supplementary examination only at the end of 6th semester and their result will not be declared in time for the Campus Recruitment Program.

- The very basis of supplementary examination is to give the student another chance of improving his/her performance in the subject under question. This rule takes away that very opportunity and imposes an unnecessary wait of an year on the student.

- As per the current rule, there is every possibility of having a regular examination in the morning and a supplementary examination in the evening. This reduces the chances of clearing the examination for the affected student. Whereas, if the students are allowed to appear for supplementary examination in every semester, the supplementary examination will be held after the scheduled regular examination, which in turn gives sufficient time for the student to prepare, appear and actually improve on his/her performance.

- Furthermore, the number of chances that a student gets to improve on his/her score get reduced according to the current rule.

Hence it is our request that **Students should be allowed to appear in supplementary examination in every semester similar to the scheme followed in and before Dec '07.**

However, considering the difficulties faced by the faculty and also the examination cell, **the current rule should at least not be applicable for the current academic year as this rule coupled with the re-evaluation rule, poses a lot of problems to the students.**

It is also our consideration that in the longer run, both for the academic standards of the institute and the students, the system followed in and before Dec '07 (system of checks and balances) was infact better.

Students NIT Kurukshetra

PROPOSAL REGARDING STUDENT REPRESENTATION

As per discussion in the meeting held on 15th Oct 2008 between students and responsible faculty members, it was concluded that a better working of the institute can be achieved through more involvement through representation of students. Thus we propose an **activity based mode of representation**. We outline the following structure.

Student representation in the following areas :

1. Academic affairs
2. Hostel affairs
3. Placements and Internships
4. Sports activities
5. Cultural activities
6. Literary activities
7. Alumni coordination

We believe student representation in these areas will assist the faculty in-charge of the above affairs in having an opinion of the students **if and when required** in the process of policy making. It will also lend the faculty "legs" in the better running of the above affairs and will in future **prevent frequent changes in rules and policies** framed.

Academic Affairs (4 students)
Representation in Academic affairs will be one student from each year.
Eligibility - He/she is among the top 7 in their branch.
Representative from the Final year will be the Academic Affairs secretary and others will be the respective academic year representatives.

Hostel Affairs (8 students)
Representation from each of the hostels and one girls representative for both the girl's hostels **as proposed by the Chief Warden in consultation with respective Wardens and Mess Committees.**

Placements and Internships (2 students)
Representation from Final and Pre-Final year students as **proposed by the Professor in-charge in consultation with the respective Placement Advisory Committees of** the respective years.

Sports Activities (4 students)
The Year representatives and **Sports Activities secretary** (i.e. final year representative) will be as **proposed by the Professor in-charge of sports in** consultation with team captains of different sports.

Cultural Activities (1 student)
The **Cultural Secretary** will be chosen from among the various student secretaries of the Official Clubs (Music and Dramatics Club, Student's Activities Club, AVA and Photography Club) **as per mutual understanding and discussions between the** Club Secretaries and all concerned Teachers in-charge.

Literary Activities (1 student)
The **Literary Activities Secretary** will be chosen from among the various Student Presidents of the Official Societies (Electroreek, Microbus, Technobyte, Mechsoc and Infrastructure) as proposed by the Teachers in-charge of various societies and the Teacher in-charge of Literati in consultation with the various Student Presidents and Secretaries of the Official Societies.

Alumni coordination (1 student)
The **Alumni coordination Secretary** will be as proposed by the Teacher in-charge of the Alumni association from among accepted applications. He / She will work in coordination with the Literary and Academic Secretaries for organizing various events and reunions.

General Secretaries (2 students)
Any organization requires leaders to coordinate various activities. The various secretaries defined above will be answerable to **two General Secretaries**. The **General Secretaries will be chosen from among the various Secretaries defined above by mutual understanding and discussion amongst themselves and a concerned Teacher in-charge allotted specifically for the purpose.** The chosen general secretaries will have to vacate their earlier positions held and a suitable replacement will be chosen for them.

In addition to the above there will be representation from the following :

- Girls Representative (1 student)
- M.Tech Representative (1 student)
- MCA Representative (1 student)
- MBA Representative (1 student)

The above 27 students will form the student representation of the Student Welfare Forum.
The above proposal is just a brief outline of the structure and the selection criterion. If given the blessings of the faculty and the Honourable Director, we will bring forward a detailed charter of the various responsibilities of each secretary.

This is the proposal brought forward by the students of NIT Kurukshetra in our limited wisdom, with which we can better run our institute and improve it to one day match the standards of the IITs.

Students NITK

The ~~Director~~ Dean /Academic
NIT KURUKShetra

Subt- To arrange extra class for newly admitted
Students

Sir,

with due respect, I want to state that we
are newly admitted to this prestigious institute
through Institutional counselling held on
29th sep, 2010. And we were supposed to be
given extra classes to cover the syllabus
NE I, therefore, request your goodself
to be kind enough to arrange extra classes.

Yours faithfully

Dated - 22nd Oct, 2010

(i) Md Mashkoor Alam (108577)
(ii) Siddharth (108574)
(iii) Nishant Kumar (108575)
(iv) Harish Senkash (108579)
(v) Raushan kr Prashant (108576)
(vi) Tanuj Rajvanshi (108570)
(vii) intyfah singh (108734)
(viii) Ritish Kumar (108732)
(ix) Himanshu Vashisht (108513)
(x) Anju Mittal (108560)
(xi) Sisihika Singh (108562)
(xii) Resha Aurwar (108757)
(xiii) Monica (108257)

11/26/2008

To the Dean Academic,
NIT Kurukshetra

21st October 2008

Respected Sir

Sub:- Application for conducting extra sessional
for students admitted during the fourth
counselling process.

With due respect, all the students who got
admission late as per institutional counselling
and joining w.e.f. 13th Oct. 2008 request
the authority concerned to arrange additional
sessional exams as we could not prepare for
the sessionals which were conducted from
16th to 18th Oct 2008 as we have not
attended any of the lectures held before.
Hoping to be favoured soon.

Thanking you.

Yours truly,

Sign.	Name.	Sec.	Admn. No
	Monisha Agarwal	A-2	108140
	Carendy	4	108158
	Sahil Setia	A-2	108354
	Arya Deep 103	A-2	108350
	Nikhil Gami	B-2	108355
	Tanuj Rajvanshi	G-2	108578

	Aniraj Sangar	B-2	108358
9	Arjun Patidar	B-2	108357
10	Md. Mashikhorr Alam	G-2	108577
11	Ritesh Kumar	J-1	108732
12	Nirmal Kumar	I-9	108706
13	Sumit Kumar	E_2	108468
14	Pranay Raj	E_2	108467
15	Abhishek	C-2	108360
16	Divay	I-2	108706
17	Monica	B-2	108356
18	Shobhini	C-2	108462
19	Abhishek	C-2	108360
20	Monika	B-2	108356
21	Anjul	9-2	108580
22	Ashtha.		108707
23	Manish	C_1-9	108579

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

No. Acad./21st SCSA/

Minutes of the 21st SCSA meeting held on 19th December, 2008 at 4.30 PM in the Board Room of the Institute

The following were present :-

1	Dr. M.N.Bandyopadhyay, Director	In Chair
2.	Sh. R.P.S Lohchab, Registrar	Member-Secretary, Senate
3.	Dr. T.K Garg, Professor, Mech. Engg. Deptt.	
3.	Dr. S.P Jain, Dean (P&D)	
6.	Dr. V.K Sehgal, Chairman, Civil Engg. Deptt.	
7.	Dr. S.K Sharma, Dean (Estate, Const & Elect. Mtc.)	
7.	Dr. K.S.Kasana, Chairman, Mech. Engg. Deptt.	
8.	Dr. A Swarup, Chairman, Elect. Engg. Deptt.	
9.	Dr. Kuldeep Kumar, Chairman, Mathematics Deptt.	
10.	Dr. R.K Deswal, Controller of Exams	
11.	Dr. Brahmjit Singh, Chairman, ECE Deptt.	
12.	Dr. S.K Mahna, Chairman, Physics Deptt.	
13.	Dr. P.J Philip, Chairman, Hum. & Social Scs Deptt.	
14.	Dr. R.S Bhatia, Chairman, Computer Applications Deptt.	
15.	Dr. A.K Singh, Chairman, Computer Engg. Deptt.	
16.	Dr. J.K Chhabra, Assistant Professor, Computer Engg. Deptt.	
17.	Dr. D.P Singh, Chairman, Chemistry Department	
18.	Dr. Baldev Setia, Professor Incharge (Acad.Affairs & Senate)	
19.	Dr. Ashwani Jain, Professor Incharge (Acad. Affairs & Senate)	

The following decisions were taken:

1. **To discuss the draft constitution of students representatives**

   The draft constitution of students' representatives as received from the students was placed before the SCSA. Some members pointed out that constitution of a comprehensive body of students for all major activities was beyond the scope of SCSA. Also certain student bodies representing the hostel affairs, cultural affairs, sports affairs etc. were already in existence. In light of this, it was decided that a core group as suggested by the students can not come into existence without prior approval of higher body like the Senate or the BOG as the Director may deem fit. However, SCSA approved the required students body to look after the academic matters of students. The accepted constitution was as follows:

Course	Year	No. of students	Criterion	Remarks
B.Tech	1st Year	4	-	To be nominated by Dean (Academic)
	2nd to Final Year	1 per year per branch Total – 21	Topper of each branch	
MCA	1st to Final Year	1	-	To be nominated by Dean (Academic)
MBA	1st to Final Year	1	-	-do-
M.Tech		1		-do-
Ph.D		1	-	-do-

This student representative body will meet the Dean (Academic) a minimum of once every semester.

2. To consider the issue of award of degree to an old B.Tech student Sh. Vishal Phonsa, Roll No. J2K408

The issue of award of degree to an old B.Tech student Sh. Vishal Phonsa, Roll No. J2K408 was considered and it was decided that the same may be placed before the Senate for consideration and approval. The Controller of Examinations was requested to include the name of above said student in the list of students who have to be awarded degrees in the forthcoming 6th Annual Convocation.

3. To consider change in date of the Sports function

It was decided that there was no need of change in the date of Sports function.

4. To consider the request of some B.Tech students for change in rule/ modalities for awarding merit scholarship

The SCSA considered the request of some B.Tech students for change in rule for awarding merit scholarship and decided that in future the scholarship will be granted on the basis of SGPA of the respective year. Also, it was decided that Academic Section will prepare an agenda item for Finance Committee meeting for enhancing the number of merit scholarships.

Further, it was decided that those meritorious students who get selected for merit scholarship but cannot be awarded the scholarship as they were already drawing some other scholarship, may be issued a Merit Certificate duly indicating their academic achievement.

5. To consider the request of some faculty members regarding reviewing some aspects of the Ph.D Ordinance (specifically Rules R-7.2, R-7.5, and R-13.2)

The SCSA taken the following decisions with regard to Ph.D Ordinance specifically the clauses mentioned below:

Existing	Approved
Clause R-3.2: Additional eligibility conditions for part-time Ph.D admission: a) The applicant should be an employee of an educational institute/org. and must have completed on the last day of receiving applications, a minimum of three years of continuous service as at least a Lecturer or equivalent	Clause R-3.2: Additional eligibility conditions for part-time Ph.D admission: a) The applicant should be an employee of an educational institute/org. and must have completed on the last day of receiving applications, a minimum of two years of continuous service as at least a Lecturer or equivalent.
Clause R-7.2: Any regular full time faculty member of the concerned Deptt. of the NITK holding a Doctorate degree, having two years of regular service after Ph.D, and minimum two research papers published in the refereed journals, can be appointed a supervisor.	Clause R-7.2: Any regular full time faculty member of the concerned Deptt. of the NITK holding a Doctorate degree and minimum two research papers published in the refereed journals, can be appointed a supervisor.
Clause 7.4.1: regarding the leave period to continue to be the Ph.D supervisor: Dr. Brahmjit Singh, Chairman EC & CE proposed to increase the leave period from 18 to 24 month to continue to be the Ph.D supervisor	The SCSA decided to refer this clause to the Senate for consideration
Clause R-7.5: At no point of time there shall be more than four and a half research scholars (registered in NITK) being supervised by any faculty member. A scholar being guided jointly will be counted as ½	No change

Clause R-13.2: para 3	
A research scholar can submit his thesis only on having published at least two research papers out of his Ph.D research work in such refereed journals which have impact fact.	A research scholar can submit his thesis only on having published at least two research papers out of his Ph.D research work in refereed journals.

6. To consider inclusion of Course No. HUT-311: Business Management for the students of IEM 6th Semester

The SCSA approved the inclusion of Course No. HUT-311: Business Management for the students of IEM 6th Semester and also approved the revised scheme.

7. To consider proposed scheme for B.Tech 1st Year (Common to all branches)

A committee comprising of Prof. R.K. Bansal, Dean Academic, Dr. S.P. Jain, Dean P&D, Dr. S.K. Sharma, Dean Estate, Construction & Electrical Maintenance, Dr. Brahmjit Singh, Chairman EC & CE and Dr. J.K. Chhabra (convener) was constituted for the purpose of revision of B.Tech. Scheme. Dr. J.K. Chhabra, Convener of the Committee explained the genesis of adopting the proposed B.Tech 1st year scheme. Some members had some reservations regarding the proposal given by the Committee. Finally it was decided after a long deliberation that a workshop may be arranged before the 12th meeting of the Senate to be held on 19.1.2009 in which Deans and Senior Professors of IITs may be invited for rationalisation on B.Tech. scheme. The outcome of the discussions on the issue in the said workshop may be placed before the Senate for consideration and approval.

8. Any other item with the permission of the Chair

Following decisions were taken:

(i) The requests for granting mercy chance to the old B.Tech prior to 2K2 batch students, Sh. Hemant Tanwani, Roll No. 2K-112 and Sh. Suraj Gopi, Roll No. 2K-120 who had been admitted to the Institute under KUK regulations, may be placed before the Senate for consideration.

(ii) The Chairman, Computer Engineering Department raised the issue of interdisciplinary course of Analog and Digital Communication for the students of B.Tech. 4th Semester Computer Engineering and Information Technology which had been taught by the faculty of EC & CE department. Now the Electronics & Communication Engineering Department had expressed its inability to teach the subject because of lack of faculty and laboratory facilities. The EC&CE Department was asked to initiate steps in enhancing the infrastructure and faculty to continue teaching the aforesaid subject. However, in order to allow time for preparation, the subject was allowed to be shifted to the Odd Semester as per decision of BOS meeting of the Computer Engineering Department held on 16.12.2008.

The meeting ended with a vote of thanks to the Chair.

(Baldev Setia)
Professor I/C (Acad. Affairs & Senate)

STRUCTURE OF THE PROPOSED STUDENT'S WELFARE FORUM

This is an effort on our part to once again emphasize on the fact that the Student's Welfare Forum is in no way a parallel body, but in fact, it is an extension of the existing system will only add to it certain areas which were previously left out. This is merely an effort on our part to help in running the various events of our institute.
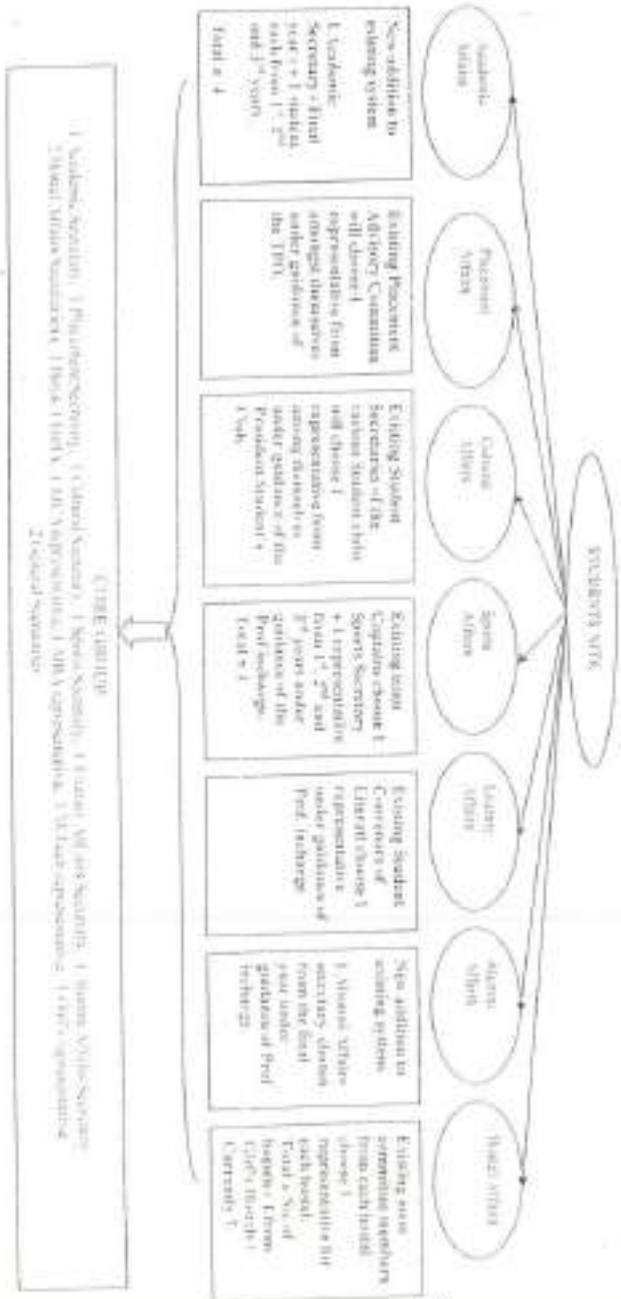
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136 119

No. Acad./2008/   Dated: 6.11.2008

The draft constitution of student representatives submitted by the students was placed before the 20th meeting of the Standing Committee on Senate Affairs held on 31.10.2008. As per decision taken in the above said meeting, this document is displayed for inviting suggestions/modifications in writing in the constitution of student representatives from all major sectors i.e. faculty, students and administration. This will help the administration in arriving at a consensus for constitution of student representative body.

Dean (Academic)

All Deans

All Chairmen of the Departments

Controller of Exams

Notice Boards (Institute & Hostels)

Professor I/C CCN with the request to kindly display the same on the Institute Website

Copy to: DS to Director for the kind information of the Director

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PROPOSAL REGARDING STUDENT REPRESENTATION

As per discussion in the meeting held on 15th Oct 2008 between students and responsible faculty members, it was concluded that a better working of the institute can be achieved through more involvement through representation of students. Thus we propose an activity based mode of representation. We outline the following structure.

Student representation in the following areas :
1. Academic affairs
2. Hostel affairs
3. Placements and Internships
4. Sports activities
5. Cultural activities
6. Literary activities
7. Alumni coordination

We believe student representation in these areas will assist the faculty in-charge of the above affairs in having an opinion of the students if and when required in the process of policy making. It will also lend the faculty "legs" in the better running of the above affairs and will in future prevent frequent changes in rules and policies framed.

Academic Affairs (4 students)
Representation in Academic affairs will be one student from each year.
Eligibility - He/she is among the top 7 in their branch.
Representative from the Final year will be the Academic Affairs secretary and others will be the respective academic year representatives.

Hostel Affairs (8 students)
Representation from each of the hostels and one girls representative for both the girl's hostels as proposed by the Chief Warden in consultation with respective Wardens and Mess Committees.

Placements and Internships (2 students)
Representation from Final and Pre-Final year students as proposed by the Professor in-charge in consultation with the respective Placement Advisory Committees of the respective years.

Sports Activities (4 students)
The Year representatives and Sports Activities secretary (i.e. final year representative) will be as proposed by the Professor in-charge of sports in consultation with team captains of different sports.

Cultural Activities (1 student)
The Cultural Secretary will be chosen from among the various student secretaries of the Official Clubs (Music and Dramatics Club, Student's Activities Club, AVA and Photography Club) as per mutual understanding and discussions between the Club Secretaries and all concerned Teachers in-charge.

To,

The Director
NITK ,Kurukshetra Haryana

Dated: 30.10.08

Subject: Non Issuance of Degree for RollNo : J2K408 (2000Batch)

Respected Sir,

In Continuation to my earlier letter, I wish to bring in to your kind notice that I was a student of NITK , Branch: ECE , Roll no: J2K408 & passed out in the year 2004 , I am holding PDC But I've not been issued my main B.Tech Degree. I have written many times to the Controller of Exams & Dean Acad. Affairs also (With a copy to your office). But till now I've not been issued the degree.

Sir, from the last one year I've written many times to your office (with a copy to Controller Exams, Academic Department) & also talked to the concerned officies ,But it is not yielding any results.

Sir, again I request you to please intervene and get my degree issued to me as it is already more than 4 years since I have passed out and I am just holding the PDC. Sir you are aware how important is to get degree for a student, I am continuously facing problems in applying for higher studies, jobs due to this.

Hoping for an early action please.

Copy to: 1.Sh C.B Mathur, Hon'ble Chairman Board of Governors NITK.

2.Shri K. M. Acharya, Special Secretary, Government of India, MHRD.

Attachments: 1. Provisional Degree certificate
2. Self Addressed stamped envelope.

Thanking you.

Yours truly,

VISHAL PHONSA
63/5 NANAK NAGAR JAMMU TAWI (J&K)-180004
Contact number: 09816009014

PUC is an application received from Sh. Vishal Phonsa, Roll No. J2K408, ex-student of B.Tech. 4-year Degree Course in the discipline of Electronics and Comm. Engineering at this Institute regarding issue of original Degree Certificate.

In this connection, it is stated that Sh. Vishal Phonsa, Roll No. J2K408 has passed his B.Tech. Degree Course in the discipline of Electronics and Comm. Engineering securing 3101/5000 marks in May/June,2004 (result declared on 25.04.2005 due to non submission of old mark-sheets). His Original Degree could not be prepared due to unavoidable circumstances in the Convocation held in 2006.

It is added that his degree was prepared but could not be signed as his name was not included in the agenda of the meeting of the senate. Further, his name was also not approved in SCSA meeting.

- Therefore, it is requested that his name may be got approved in the ensuing SCSA meeting.

Submitted please.

Controller of Examination

Dean(Acad.)

Placed before
SCSA meeting.

ACADEMIC CALENDAR SESSION 2008-2009

ODD SEMESTER

SR. NO.	ACTIVITY	PERIOD
1	Registration	16th to 18th July 2008 (Wednesday to Friday)
2	Classes commence	21.07.2008 (Monday)
3	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	28.07.2008 (Monday)
4	Mid-Semester Exam-I	28.08.2008 (Thursday) to 30.08.2008 (Saturday)
5	Mid-Semester Vacation	03.10.2008 (Friday) to 10.10.2008 (Friday)
6	Mid-Semester Exam-II	16.10.2008 (Thursday) to 18.10.2008 (Saturday)
7	Literati-2009	To be proposed by the Professor I/C Literati
8	Mid-Semester Exam-III	May be arranged by the respective teachers as per their convenience
9	End of Teaching	14.11.2008 (Friday)
10	End Semester Exams begin	24.11.2008 (Monday)
11	Winter Vacation	01.12.2008 (Monday) to 12.12.2008 (Friday)
12	Declaration of Result	By the end of December 2008

EVEN SEMESTER

SR. NO.	ACTIVITY	PERIOD
1	Registration	29th to 31st December 2008 (Monday to Wednesday)
2	Classes commence	01.01.2009 (Thursday)
3	Last Date for late registration with late fee of Rs.250/- with the permission of Director/Dean (Academic)	05.01.2009 (Monday)
4	Convocation	First fortnight of January 2009
5	Mid-Semester Exam-I	05.02.2009 (Thursday) to 07.02.2009 (Saturday)
6	Athletic Meet	13.02.2009 (Friday) to 13.02.2009 (Sunday)
7	Confluence-2009	5th to 7th March 2009 (Thursday to Saturday)
8	Mid-Semester Vacation	09.03.2009 (Monday) to 13.03.2009 (Friday)
9	Mid-Semester Exam-II	19.03.2009 (Thursday) to 21.03.2009 (Saturday)
10	Mid-Semester Exam-III	May be arranged by the respective teachers as per their convenience
11	End of Teaching	10.04.2009 (Thursday)
12	End Semester Exams begin	11.05.2009 (Monday)
13	Summer Vacation	25.05.2009 (Monday) to 03.06.2009 (Friday)
14	Practical Training Starts	27.05.2009 (Wednesday)
15	Declaration of Result	By the end of May 2009

GAZETTED HOLIDAYS

August 2008
15 Fri Independence Day
October
02 Thu Mahatma Gandhi's B'day
02 Thu Ida'l Fitar
09 Thu Dussehra
28 Tue Deepavali
November
13 Thu Guru Nanak's B'day

December
09 Tue Idu'l Zuha (Bakrid)
25 Thu Christmas Day
January 2009
07 Wed Muharram
26 Mon Republic Day
March
11 Wed Holi
April
03 Fri Ram Navmi
10 Fri Good Friday

Dean (Academic)

Item: 10.14 To re-consider Merit-scholarship on CGPA basis instead of the present SGPA basis

Presently 34 nos. of Merit scholarships have been allotted to various branches of B.Tech. for the batches commencing 2004 and 2005 (3rd year and 4th Year). Scholarship includes a cash award of Rs 1, 000/- , waiving of tuition fee and issuance of a Merit Certificate.

The Finance Committee in its 6th meeting held on 14.12.2005 vide Item No. 6.6 made a provision for only 15 Merit Scholarships to the 15 top students of B.Tech 2006 batch onwards. Scholarship comprised of a cash prize of Rs.3, 000/- and a Merit Certificate. There was no provision of waiving of tuition fee.

The break-up of number of Scholarships (Branch-wise) is given in table below.

STATUS OF NUMBER OF SCHOLARSHIPS

Batch	Number	CIVIL	COMP	ELECT.	ECE	IEM	ITY	MECH.
2004	34	7	3	8	7	No adm	No adm	9
2005	34	7	3	8	7	No adm	No adm	9
2006	15	3	3	3	3	No Prov	No Prov	3
2007	15	3	3	3	3	No Prov	No Prov	3

The present practice of deciding the merit of top students is on the basis of SGPA of that particular year.

However, it is proposed that Merit Scholarships henceforth may be granted on the basis of CGPA instead of SGPA of two semesters of that particular year. This may be made effective from the next academic session i.e. 2008-09. The criteria of merit will be as given below

a) For 1st Year students: on the basis of CGPA/SGPA of 1st semester result
b) For 2nd Year students: on the basis of results up to 2nd semester (CGPA)
c) For 3rd Year students: on the basis of results up to 4th semester (CGPA)
d) For 4th Year students: on the basis of result up to 6th semester (CGPA)

Other and basic terms and conditions of the scholarship will remain the same.

The Senate may kindly consider, discuss and decide.

the Computer Engg. Deptt. will be member of the Board of Studies of the Department of Computer Applications instead of Dr. Mayank Dave who had been mentioned by name. The Senate also approved the Scheme and Syllabi of Master of Computer Applications 2nd Semester.

Item 10.12: To ratify the action taken by the Chairman, Senate in approving the revised Scheme of 1st to 4th Semester and detailed syllabi of 2nd to 4th Semester of MBA Course.

The Senate ratified the action taken by the Chairman Senate in approving the revised scheme of 1st to 4th Semester and detailed syllabi of 2nd to 4th Semester of MBA Course.

Item 10.13: To consider NCC as an alternate course to Physical Education and Sports for the students of B.Tech. 1st Year

The Senate considered NCC as an alternate course to Physical Education and Sports for the students of B.Tech. 1st Year and approved the same with a suggestion to correct the text of the syllabi. Other conditions/intake to the course will be as per the agenda item.

Item 10.14: To re-consider Merit-Scholarship on CGPA basis instead of the present SGPA basis

The Senate re-considered Merit Scholarship on CGPA basis instead of the present SGPA basis and approved the same. It was also decided that Academic Section will send an item to the next Finance Committee meeting for enhancing number of scholarships as well as amount of scholarships.

Item 10.15: To consider awarding of Medals and Prizes to M.Tech. MBA and MCA students

The Senate considered the item regarding Medals and Prizes to M.Tech. MBA and MCA students and decided that students of M.Tech. MBA and MCA may also be considered for the award of Medals & Prizes. Further, if

The Director

NIT Kurukshetra .

Sir

I wish to offer that I am a student of Industrial engineering and management (3rd year) in your institute. I wish to bring to your information that I scored an SGPA of **9.6538** and **9.6792** in 3rd and 4th semester respectively and according to that my departmental rank was **2nd** for the **second year** .But when the merit scholarship list came out ,my name was not there in it ,the reason being that from this year onwards , the **cumulative** grade point is being considered for enlisting the merit scholarships. Sir my point is that if some student was not able to do well in a specific year for some reason or the other, will he have to bear its consequences for all next years . Inspite of doing this well in whole second year , I was not nominated for the scholarship. I think it is a bit too harsh for a student who has put in great effort to perform well. I think that the scholarships should be given on the basis of yearly performance **as given upto the last year** . Therefore I request you to look into the matter and reconsider the criteria for the scholarships. I hope that some **reconciliary action** will be taken in this matter as soon as possible for the students affected by this new nomination criteria.

Thanking you

Yours sincerely

Manuj Sardana

1557/06

IEM-4

To

Dean Academics

National Institute of Technology

Kurukshetra, Haryana

Respected Sir,

Subject: Application regarding change in rule for awarding Merit Scholarship

This is with regard to the change in rule for awarding merit scholarship. I wish to bring to your notice that I (Prabudh Jain, Roll no. 1804/06) have secured first rank in Civil Engineering branch for Academic Year 2007-08 (S.G.P.A of 3rd semester = 9.7778, S.G.P.A of 4th semester =9.4615, total 19.23/20). But, owing to the change in rule for awarding scholarship, whereby students are awarded scholarship on the basis of C.G.P.A up to the given academic year, I have not been shortlisted for the scholarship. I would like to bring to your kind notice that the scholarship was a motivating force for my effort and I request that same type of recognition should be given to me for my efforts.

Also, I would like to bring to your notice that this recognition will be of great importance for me as I wish to pursue higher studies and such recognition would prove to be beneficial while taking admission into good universities.

I believe you would look into the matter and do the needful.

Thanking you

Yours faithfully

Prabudh Jain (1804/06)

Pre-final year

B-Tech Civil Engineering

Copy to Prof In Charge (Academics)

for recommendation of Somesh

[signature]

10.11.2008

D/P (Acad)

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To,
Dean Academic,
NIT Kurukshetra

Dated: Nov 10, 2008

Subject: - Regarding the Merit scholarship given by college.

Sir,

I am a student of B.Tech 7th semester of this college. I am pursuing my degree in Electrical Engineering. I got SGPA 9.10/10 and 9.49/10 in 5th and 6th semester respectively. And I am at 3rd position in department on the basis of the performance in Academic year 2007-08. Each year college gives scholarship to the top 10% students of each branch on the basis of year-wise performance (SGPA) so I would have got Merit Scholarship this year. But this time scholarship is given on the basis of overall performance (CGPA) up to 3rd year. Merit Scholarship was one of the motivating factors as this recognition has great importance in an Academic Career. But the student who already got the benefit of scholarship because of their academic performance in previous years are again going to get it. Thus the students who performed better in this academic year are disappointed by change in rule. The merit certificate is useful in further studies. Therefore I request you to provide some recognition. I will be highly obliged if you look into this matter.

Thanking you,

Yours Obediently,
Pankaj Gupta
Roll no:-10380?
B.Tech (7th sem)

Copy to : Professor Incharge Academic Affairs
Copy Attached

5th & 6th semesters DMC

for consideration of Senate

10.11.2008

DR (Acad)

Sub: Request for review of the latest PhD ordinance in the academic and research interests of the institute

The following points are hereby brought to your kind notice, which are restraining research activity in NIT Kurukshetra.

1. Rule R-7.2 *"Any regular full-time faculty member of the concerned Dept. of the NITK holding a Doctorate degree, having two years of regular service after PhD and minimum two research papers published in the refereed journals, can be appointed a supervisor"*

There are refereed journals available now-a-days which publish papers within fortnight on payment but charge hefty amount. The quality is very poor and further it costs faculty heavily. On the other hand, publications in standard journals take time. Further, faculty members who are guiding research without research papers are now restricted to do so, means earlier candidates are allowed to continue whereas they can not guide new scholars. It means, person is capable but is not given any chance further. The purpose of restricting young faculty researchers obtaining PhD for two years to guide research seems extreme injustice to faculty members. Fresh PhDs generally brim with fresh ideas and are capable of producing quick results as compared to old ones. With a gap of two years, these ideas are likely to be lost.

The teacher with proven credentials to guide research scholars with Ph D guided and awarded are being deprived of guiding new research scholars, which seems highly unjustified. The candidates supervised by them have been selected as Professors in NIT Kurukshetra.

In the light of above, the rule deserves to be amended to previous one.

2. Rule R-7.5 *"At no point of time there shall be more than four research scholars (registered in NITK) being supervised by any faculty members. A scholar being guided jointly will be counted as half"*

The number may be reasonably, suitably and substantially increased to at least eight.

3. Last para of Rule R-13.2 *"A research scholar can submit his thesis only on having published at least two research papers out of his PhD research work in such refereed journals which have impact factor."*

Neither the research papers alone nor the impact factor are related to quality of research. Further, if this is the case, then there is no role of DRC in evaluating the progress of research and taking decision regarding submission of candidate's PhD thesis.

Impact factor is not related to the quality of the research.

In addition to this there are several discrepancies and doubts raised in the latest ordinance, and hence it is requested that the current PhD ordinance be suppressed and earlier one which was in force prior to May 1st, 2008, which was also duly approved by the Senate, may please be continued.

Kindly treat it urgent, please

Faculty Members of NIT Kurukshetra

DIRECTOR, NIT Kurukshetra

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Electronics and Communication Engineering Department
National Institute of Technology, Kurukshetra

Dated: 18.12.2008

No. ECE/08/1132

This has reference to the SCSA meeting to be held on 19.12.2008. In continuation to agenda item 5, I hereby propose to consider the Clause R-7.4.1 for reviewing the leave period from 18 months to 24 months to continue to be the Ph.D. supervisor.

The proposal is submitted for kind consideration as an addendum to agenda item 5.

Brahm 18.12.08
(Brahmjit Singh)
Chairman

Dean, Academic

Copy to
1. DS to Director with the request to Director for consideration of the proposal.

2. Professor in-Charge, Academic Affairs

ii) Sciences/Mathematics Stream-

Master's degree (M.Sc. /M.A.) in the appropriate discipline, or equivalent, with a minimum of 65% marks in aggregate (of all the years/semesters of the course), or equivalent CGPA.

iii) Humanities & Social Sciences Stream-

Master's degree (M.A.) in the appropriate discipline, or equivalent, with a minimum of 60% marks in aggregate (of all the years/semesters of the course), or equivalent CGPA.

R-3.2 Additional Eligibility Conditions For Part-Time Ph.D. Admission

a) The applicant should be an employee of an educational institute/org and must have completed on the last day of receiving applications, a minimum of three years of continuous service as at least a Lecturer or equivalent.

b) The candidate proves to the satisfaction of the DRC that his/her official duties permit him to devote sufficient time to research.

c) The candidate proves to the satisfaction of the DRC that facilities for pursuing research are available at his place of work in the chosen field of research.

d) He will be required to visit NITK (on working days) to meet his supervisor in the Deptt. at least twice in each semester at intervals of not less than a month, and such visit be reported to the Chairman of the DRC for record.

R-3.3 Eligibility for Institute Scholarship

Only full-time Ph.D. research scholars are eligible for the award of the Institute scholarship.

A candidate/scholar is required to apply for scholarship. In a particular department, scholarships will be awarded only if these are available in that department.

In Engineering Stream, scholarship to those scholars who have a Master's or equivalent degree will be   awarded to GATE- qualified scholars on the basis of the GATE score merit list.

Scholarship to those scholars who are only B.Tech/B.E. or equivalent, will be awarded to such scholars who have a valid GATE score card.

In Sciences/Mathematics, and Humanities & Social Sciences Streams, only those   scholars who are M. Phil., or have cleared relevant national level tests like   GATE, or   NET conducted by UGC, CSIR, ICAR and possess a valid score card, are eligible. However, preference will be given first to M.Phil. scholars.

In case no eligible candidate as defined above is available for the award of the scholarship,   the Director, on the recommendation of the Chairman of the concerned Deptt. and the Dean may award the scholarship to the scholars at his discretion.

The scholarship amount will be as under-

M.Tech/M.E/M.S. or equivalent, and M.Phil: Rs 9500/- p.m.

All efforts should be made by the concerned Departments and the academic section that the registration process of PhD candidates is complete within one month of the start of the semester.

R-6 **REGISTRATION**

R-6.1 A candidate is deemed to have been registered on completion of admission process for the 1st semester of the programme. Every scholar is required to deposit the fees and renew the registration every semester till the submission of the thesis. The renewal of registration every semester shall be subject to the satisfactory progress in his/ her research work as recommended by the DRC. If a scholar's progress is adjudged as unsatisfactory, the DRC may recommend notional registration; however such a chance can be allowed only once during the whole period. A scholar should deposit his semester registration fees only after having been notified by the Academic section that the concerned DRC has recommended his registration for that semester. The Academic section is to send the list of the duly registered scholars in the concerned Dept in the beginning of every semester.

R-6.2 **Time Period Requirement for Thesis Submission**

a) The minimum period of registration shall be two years for a full-time scholar, and three years for a part-time scholar.

b) The maximum time for the submission of the thesis for a full-time scholar is five years, and that for a part-time scholar is six years from the date of the initial registration for the Ph.D. Programme. However, as a special case, on the recommendation of the Chairman of the DRC and the Dean), this limit may be extended up to a maximum period of seven years for both the categories by the Director, beyond which the registration shall stand cancelled automatically.

R-7 **THESIS SUPERVISOR(s)**

R-7.1 Every registered scholar shall be assigned a research supervisor as approved by the DRC.

R-7.2 Any regular full-time faculty member of the concerned Deptt. of the NITK holding a Doctorate degree, having two years of regular service after PhD, and minimum two research papers published in the refereed journals, can be appointed a supervisor.

R-7.3 Depending on the problem, a scholar may be assigned two supervisors, designated as supervisor and co-supervisor. In no case, the number of co-supervisor shall be more than one.

R-7.4 **Appointment of alternative Supervisor**

A faculty member appointed as Ph.D. supervisor is normally expected to be available to the research scholar in the institute till the thesis is submitted. However, under unavoidable circumstances, such as long leave, resignation,

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retirement, or death; an alternative supervisor may have to be appointed. In such special cases, the appointment of the supervisor will be regulated as under:

R-7.4.1   A Supervisor proceeds on leave of one month or more

(i) If the synopsis of the thesis of the scholar has not yet been submitted,

a) and the supervisor proceeds on leave for one month or more but less than 18 months, then the supervisor should immediately inform the chairman DRC whether he will continue to guide and supervise the research work of his scholar effectively during his leave period or not. In case he does not inform within five days of the commencement of his leave, or informs that he will not be able to guide effectively, then he ceases to be the supervisor of that scholar.

b) and if at any point of time, the total period of long (a month, or greater) leaves of the supervisor of a scholar equals or exceeds 18 months, that supervisor automatically ceases to be his/ her supervisor.

c) and if a supervisor proceeds on leave for 18 months or more, he ceases to be the supervisor.

d) and once a supervisor ceases to be the supervisor, he can not again become the supervisor of that scholar.

In above cases a), b), c) and d), when a supervisor ceases to be the supervisor, the other supervisor (of NITK) if there, shall act as the supervisor; and if there is no 'other' supervisor, the DRC shall immediately appoint alternative supervisor for the scholar.

(ii) If the thesis/ synopsis of the thesis has been submitted before the supervisor proceeds on leave,

and he consents to continue to be the supervisor, then he can continue to be so. If he declines, and there is no co-supervisor (of NITK), a caretaker supervisor will have to be appointed.

Further, if major revision becomes necessary, and the co-supervisor or the caretaker supervisor provides the required help in carrying out the major revision, he will automatically be treated as a supervisor of that candidate.

R-7.4.2   A Supervisor retires

A faculty member who is due to retire within the next two years from the date the DRC meets to appoint a supervisor, can not be appointed a supervisor. If a faculty member on retirement informs that he shall continue effectively supervising the scholar, can continue as a supervisor, if either reemployed, or appointed Emeritus Fellow, or the synopsis of the thesis has been submitted, or the Director is convinced of his/her availability/continued guidance to the scholar and permits him to continue. If necessary, alternative/ caretaker supervisor be appointed by the DRC.

R-7.4.3   A Supervisor resigns

If necessary, alternative/ caretaker supervisor be appointed by the DRC.

R-7.4.4   A Supervisor expires

If necessary, alternative/ caretaker supervisor be appointed by the DRC.

R-7.5   At no point of time there shall be more than four research scholars (registered in NITK) being supervised by any faculty member. A scholar being guided jointly will be counted as ½.

R-8   COURSES AND CREDITS

A research scholar shall have to meet the requirements of the courses and the credits as decided by the Senate from time to time.

R-9   COMPREHENSIVE EVALUATION

R-9.1   Every scholar is required to take comprehensive examination, which will test his comprehensiveness in his broad field of research, and his academic preparation and potential to carry out the research. The comprehensive evaluation may be a combination of written and oral examinations, and may be separately conducted before evaluation of the research plan proposal. The written as well as the oral examination will be conducted by the DRC. The schedule of the oral examination shall also be intimated to the Dean. In the oral examination, Dean/ his nominee (of the rank of a Professor) shall be an additional member of the DRC. Every scholar must pass the comprehensive examination within 3-12 months of his initial registration.

Every scholar is also required to submit his research plan proposal. The research plan proposal, giving a brief account of the related work already reported in the literature, should clearly spell out the objective, justify the need of the objective, and the methodology to be followed to achieve that objective. Subsequently, the research work should be carried out in accordance with the approved research plan.

R-9.2   The following procedure is to be uniformly followed by all the Departments in conducting the comprehensive evaluation of the Ph.D. scholars.

(a)   The written examination should be conducted by the DRC.

(b)   The result of the written examination should be declared within two weeks as passed/ failed.

(c)   After the scholar has passed the written examination, the oral examination should be conducted by the DRC of the candidate.

(d)   After passing in the oral examination, the research proposal will be evaluated by the DRC through seminar.

R-9.3 (a)   Written and oral examination

If a scholar fails in written/oral examination, he/she can reappear in the examination only after a period of three months.

(b)   Research Plan

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However, the thesis should be submitted within the prescribed time limit as per regulations.

R-11.3 Panel of Examiners

A panel of at least ten external experts, including foreign experts, and the authors of the recent papers in the references cited by the scholar in the area of his Ph.D. work would be suggested to the DRC by the Supervisor. The DRC will consider the suggested panel and will finally recommend to the BOS a panel of ten external examiners, which will include at least three examiners from outside India, from advanced/developed countries and the rest from India, preferably from the Institutes of repute. The DRC shall also recommend the internal examiner, who normally would be the scholar's supervisor. The recommended panel will be considered and approved/ modified by BOS.

R-12

BOARD OF EXAMINERS

On receipt of the title and synopsis of the thesis, the Director will appoint a Board of Examiners for each candidate from the list approved by the BOS. The Board of examiners will consist of one internal examiner, and two external examiners, one out of which **would be from within India, and the other from abroad**. These external examiners shall be chosen normally form the panel of examiners recommended by the BOS as aforesaid. A person working in the same organization(s)/ institute(s) where the research scholar is employed cannot, however, be appointed as External Examiner for that research scholar.

For evaluating the thesis, an honorarium at the rate of Rs 2000/-per thesis is payable to the Indian external examiner and at the rate of US $ 200/- or equivalent is payable to the foreign external examiner. The viva-voce examination of the scholar will be given by the Indian external examiner, who will be paid an additional honorarium of Rs 1000/-.

An examiner will be reimbursed TA/DA as per the Institute (NITK) rules. He will also be reimbursed all associated correspondence expenses incurred by him for the purpose of examination.

R-13

THESIS SUBMISSION

R-13.1 The scholar will submit a soft copy of the thesis in PDF format on CD, and four unbound copies with soft covers, typed in English, one and a half spaced, printed in Times New Roman 12 pt. or Arial 11 pt. on one side of A-4 size papers, having margins 1.25" – left, 1.0" – right, 1.0" – top and 1.0" - bottom, along with the examination form and the examination fee of Rs 5000/-. The examination form will be available with the COE.

R-13.2 The thesis shall contain a critical account of the research carried out by the scholar. It should be characterized by discovery of facts or fresh approach scholar. It should be characterized by discovery of facts or fresh approach towards interpretation of facts and theories or significant contribution to knowledge or development or a combination of these. It should bear evidence of the scholar's capacity for analysis and judgment as well as ability to carry out independent investigation, design or development.

No part of the thesis or supplementary published work should have been submitted for the award of any other degree or diploma.

A research scholar can submit his thesis only on having published at least two research papers out of his Ph.D. research work in such refereed journals which have impact factor.

R-13.3 A candidate can submit his/her thesis within the time period as stipulated in regulations provided that he/she has completed the minimum period of registration.

R-14   ## THESIS EVALUATION

All correspondence/ notifications in regard to thesis evaluation and viva-voce examination of the scholar (except where stated otherwise) shall be done by the Controller of Examinations. Except for the correspondence with the candidate or general circulars/ notifications, the correspondence shall be confidential.

R-14.1 Each examiner will be requested to submit a detailed assessment report and his /her recommendation within six weeks of the date of receiving the thesis.

     i) The examiners will examine the thesis individually with a view to judge that the thesis is a piece of research work characterized by

     a) The discovery of facts, or

     b) A fresh approach towards interpretation and application of facts or theories, or

     c) A distinct advancement in technology.

     ii) Each examiner is required to give his/her opinion about candidate's capacity for critical examination and sound judgment. The examiner will submit the report to the Controller of Examinations on the prescribed form supplied by him clearly recommending that:

     a) The thesis is accepted for the award of the Ph.D. degree subject to the candidate's giving satisfactory answer to the queries specifically mentioned in the report, at the time of Viva-Voce examination, or

     b) The candidate be asked to resubmit his/her thesis in the revised form, or

     c) The thesis be rejected.

R-14.2 In the event of the thesis report not being received from an examiner within a period of three months from the date of dispatch, the Director may approve alternate examiner in his place for evaluating the thesis from the approved list of examiners. Before corresponding with the alternate examiner, the original examiner must be informed by the COE of the cancellation of his appointment, stating the reason therein.

MECHANICAL ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY, KURUIKSHETRA

No. MED/08////3

Date: /? /? ·

With reference to the letter No. Hum&SS/08/726 dated 16.12.2008 from the Chairman Humanities & Social Sciences for including the course **HUT-311- Business Mangement** to the students of **IEM 6th Semester** w.e.f. even Semester 2008-09. The Chairman discussed with the faculty members of Mech & IEM Deptt., and recommended the modified scheme of B.Tech 6th Sem IEM (Copy enclosed). This may kindly be included in the agenda of SCSA meeting to be held on 18.12.08.

Chairman 1st/12/08

Prof. I/c (Academic Affairs)

Copy to:
1.   Chairman Hum & Social Sciences
2.   Dr. Ajai Jain, Prof. I/C (Instt., Time Table)
3.   D.R. (Acad.)

MECHANICAL ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA

No. MED/08/ 113

Date: 17-12-

B. Tech. IEM. 6th Sem.   Exisisting Scheme

Sl. No.	Course No	Subjects	Teaching Schedule				Credits	Duration of Examinations (Hours)
			L	T	P/D	Total		
1	IEM-302	Operations Management	4	1	-	5	4.5	3
2	IEM-304	Materials Management	4	1	-	5	4.5	3
3	IEM-306	Industrial Quality Control	4	1	-	5	4.5	3
4	IEM-	Elective 1*	4	1	-	5	4.5	3
5	IEM-308	Mechatronics	4	1	-	5	3.5	3
6	IEM-310	Non-Conventional Manufacturing Processes	4	1	-	5	4.5	3
7	IEM-312	Advanced Producton Technology (Pr.)	-	-	2	2	1.0	3
8	IEM-314	Mechatronics (Pr.)	-	-	2	2	1.0	3
9	IEM-316	Seminar-1	-	-	2	2	1.0	3
		Total	23	6	6	35	29.0	

B. Tech. IEM. 6th Sem.   Modified Scheme

Sl. No.	Course No	Subjects	Teaching Schedule				Credits	Duration of Examinations (Hours)
			L	T	P/D	Total		
1	IEM-302	Operatioss Management	3	1	-	4	3.5	3
2	IEM-304	Materials Management	3	1	-	4	3.5	3
3	IEM-306	Industrial Quality Control	3	1	-	4	3.5	3
4	IEM-	Elective 1*	3	1	-	4	3.5	3
5	HUT-311	Business Mangement	3	1	-	4	3.5	3
6	IEM-308	Mechatronics	3	1	-	4	3.5	3
7	IEM-310	Non-Conventional Manufacturing Processes	3	1	-	4	3.5	3
8	IEM-312	Advanced Producton Technology (Pr.)	-	-	2	2	1.0	3
9	IEM-314	Mechatronics (Pr.)	-	-	3	3	1.5	3
10	IEM-316	Seminar-1	-	-	2	2	1.0	3
		Total	21	7	7	35	28.0	

Chairman 08
19/12/

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In continuation of letter no Dean(acad)/2008/ dated 11.6.2008, and previous meeting dated 13.10.2008, a meeting of the following members of the committee was held on 11-12-2008 at 11.00 AM in the office of Dean (Academic):

1. Prof. R.K. Bansal, Dean (Acad)

2. Dr. S.P. Jain, Dean (P & D)

3. Dr. S.K. Sharma Dean (Estate, Const & Elec Mtc.)

4. Dr. Brahmjit Singh, Chairman ECE Deptt.

5. Dr. J.K. Chhabra, AP, Computer Engg Deptt.

The committee unanimously proposed the attached scheme for B. Tech First year, common to all branches, and other relevant decisions of the meeting are also enclosed herewith.

15-12-08
Jitender Kumar Chhabra
Convener

All concerned

Copy To: Director for kind information please

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MINUTES OF THE MEETING HELD ON 11-12-2008

PROPOSED SCHEME FOR B Tech First Year (Common to all branches)

SEMESTER I

Course	L + T + P
1. Math -I	$3 + 1$
2. Applied Physics OR Applied Chemistry	$3 + 1$
3. Manufacturing Processes	$4 + 0$
or Computer Fundamentals & C Programming	$3 + 1$
4. Fundamentals of Electronics Engg OR	$3 + 1$
Fundamentals of Electrical Engg.	
5. Fundamentals of Humanities & Social Sciences	$3 + 0$
6. Environment Engg OR	$3 + 0$
Engineering Graphics (Civil)	$0 + 3$
7. Applied Physics Pr OR Applied Chemistry Pr	$0 + 0 + 2$
8. Electronics Pr OR Electrical Pr	$0 + 0 + 2$
9. Workshop	$0 + 0 + 3$
OR Computer Programming Pr	$0 + 0 + 2$
Total Contact Hours:	**29 OR 28**

SEMESTER II

Course	L + T + P
1. Math -II	$3 + 1$
2. Applied Chemistry OR Applied Physics	$3 + 1$
3. Computer Fundamentals & C Programming OR	$3 + 1$
Manufacturing Processes	$4 + 0$
4. Fundamentals of Electrical Engg. OR	$3 + 1$
Fundamentals of Electronics Engg.	
5. Business Management	$3 + 1$
6. Engineering Graphics (Civil) OR	$0 + 3$
Environment Engineering	$3 + 0$
7. Applied Chemistry Pr OR Applied Physics Pr	$0 + 0 + 2$
8. Electrical Pr or Electronics Pr	$0 + 0 + 2$
9. Computer Programming Pr OR	$0 + 0 + 2$
OR Workshop	$0 + 0 + 3$
Total Contact Hours:	**29 or 30**

NOTE: OR written in various courses means that the course will be taught to half of the students in odd semester and to rest half in even semester.

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PTO

Ref: Meeting of curriculum revision committee on 13-10-2008

For Curriculum Revision of B Tech. Courses of all branches, the committee unanimously resolved the following.

1. The Contact hours of every semester should be reduced to 28-32 periods per week (instead of 35).

2. No semester scheme should consist of more than 6 theory papers.

3. The environment Engg course should be taught in First/2nd year.

4. Basic compulsory common courses of every Engg and sciences should be taught in First year by respective departments.

5. One course on Mathematics should be taught in $3^{rd}/4^{th}$ sem to every branch and syllabus of that course should be decided by every branch separately.

6. The syllabus of common courses of sciences/humanities should be decided after discussions with all Engg. departments, so as to make them suitable for the Engineering students.

7. The concept of T/P should be removed from first year.

8. The committee will propose a new first year scheme and provide a skeleton for 3rd to 8th sem listing the common/shared courses among all branches. The respective departments should fill in the remaining slots as per committee guidelines.

9. More importance should be given to practicals and special emphasis is needed on Projects.

10. After discussing about the present status of Summer Training, the committee proposed that the training after 2nd year and after 3rd year should be clubbed together. An INDUSTRIAL TRAINING of approx 3 months should be kept after 3rd year. This will require early start of 3rd semester classes and some adjustment of 6th & 7th sem classes so as to create a slot of approx 3 months during 6th & 7th sem. This Industrial training must be monitored by the faculty members. The Institute should help in arranging this training for maximum students.

1. Each of the course will be taught by each applicable department and there will be no inter-department sharing for any course. The concept of T/P and sharing of COT-101 among all departments in the existing scheme will be removed

2. Overlapping of topics already covered in 10 +2 CBSE syllabus should be avoided in Physics, Chemistry, Math courses.

3. The contents of Manufacturing Processes course should be oriented in a way that the theory taught is directly useful in their workshops.

4. In Computer Programming course, C programming should be covered in detail so as to help students of all branches for their upcoming computer oriented courses such as numerical techniques/VHDL/etc/Matlab etc.

5. The Electronics course contents will be decided by considering requirements of all departments.

6. Fundamentals of Humanities & Social Sciences will cover the Engineering Economics & Industrial Sociology contents.

7. The Engineering Graphics course will also cover some important topics of existing Engineering Graphics II.

8. The syllabii of common courses of sciences/humanities should be decided after discussions with all Engg. departments, so as to make them suitable for the Engineering students.

9. Math III will be taught in $3^{rd}/4^{th}$ semester to every branch and syllabus of that course should be decided by every branch separately. The syllabus will not be common to all branches.

10. One course on Communication & soft Skills will be taught in $5^{th}/6^{th}$ Semester to all branches, where special stress will be given to improve these skills as per Industry requirements.

11. There will be one Open Elective in 7th semester and another Open Elective in 8th semester and all departments will be encouraged to propose many electives.

12. The contact hours are being reduced to 30 hours (on average) to increase the stress on self-learning of the students.

13. Each department will plan its own scheme of $3^{rd}-8^{th}$ semester based on this first year scheme and will be free to request other Applied Sciences/Humanities/Engg departments to request some additional course as per its branch & students requirements.

14. In $3^{rd}-8^{th}$ semester, Inter Departmental courses should be encouraged on mutual exchange basis so as to make use of best expertise of relevant subjects and faculty.

15. Once this scheme is acceptable in principle, the subject codes and other details will be finalized.

The meeting ended with vote of thanks to the chair.

(Prof. R.K. Bansal)　　　　　(Dr. SP. Jain)　　　　　(Dr. S.K. Sharma)

(Dr. B.J. Singh)　　(Dr. J.K. Chhabra)

COMPUTER ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

No.CO/2008/ '' 9 1   Dated: 18-12-2008

One inter-disciplinary course related to area of Analog and Digital Communication which is taught to 4th semester students of Computer Engineering as well as Information Technology. The subject contains load of theory, tutorial as well as practical. Computer Engineering department does not have expertise in this subject and the department also does not have laboratory facilities to conduct experiments related to this subject. Therefore, the above said course was earlier handled by the Department of Electronics and Communication Engineering. Now, due to increase in intake in Electronic Engineering, the department has shown its inability to cater the needs of Computer Engineering and Information Technology in even semester. In the light of this fact, the Computer Engineering Department, in its BOS meeting held on 16.12.2008, has decided to shift the above said course in the odd semester. However, the Chairman of Electronics Engineering Department, in discussion on 18.12.2008, has informed that it would not be possible to cater the needs of Computer Engineering and Information Technology Departments in odd semester also due to insufficient space and support staff. It is requested that the proper solution to above mentioned problem may be suggested so that the department can proceed accordingly.

A.K. Singh 18/12/2008

Chairman

Copy to:

Dr. Baldev Setia, Prof. I/C (Academic Affairs) with the request to place the item in SCSA meeting on 19.12.2008 under any other item, as the matter is urgent.

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Item 12.5 To ratify the action taken by the Chairman, Senate in approving the Scheme and Syllabi of B. Tech 5th & 6th, Semester Information Technology.

The Board of Studies of the Computer Engg. Department in its meeting held on 10.07.2008 passed the scheme and syllabi of Information Technology for B.Tech 5th & 6th Semesters. Copy of scheme and syllabi are enclosed as Appendix 12.5 from page 137 to 158. As the classes were to start, the scheme and syllabi of Information Technology for B. Tech 5th and 6th semesters were approved by the Director in anticipation of the approval of the Senate.

The Senate may kindly consider and ratify the action taken by the Director and Chairman, Senate.

COMPUTER ENGINEERING DEPARMENT
NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

No.CO/BOS/2008/ 227   Dated: 11.7.2008
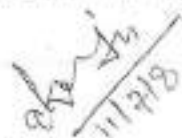
A meeting of Board of Studies in Computer Engineering Department was held on 10.7.2008 at 4.00 p.m. in the office of the undersigned. Following were present:

1.	Dr. A.K. Singh	... (In chair)
2.	Dr. Mayank Dave	... Member
3.	Dr. J.K. Chhabara	... Member
4.	Prof. R.K. Aggarwal	... Member
5.	Prof. R.M. Sharma	... Member
6.	Dr. S.K. Jain	... Special Inviter

Following decisions were taken:

1.   The Scheme and Syllabus of B.Tech. Information Technology (5 and 6 [5th and 6th] Semesters) was passed unanimously.

2.   The Scheme and Syllabus of M.Tech. Computer Engineering (full time) to be started from July, 2009 was passed unanimously.

However, one respected BOS member had certain observations regarding M.Tech. Computer Engineering (copy enclosed).

(A.K. Singh)
Chairman

All members

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Bachelor of Technology (Information Technology)
Scheme of Courses(5th SEMESTER)
w.e.f Session 2008-09

Course No.	Subject	L	T	P	Tot	Credits
IT – 301	Design and Analysis of Algorithms	3	1	-	4	3.5
IT – 303	Software Engineering	3	1	-	4	3.5
IT –305	Microprocessors	3	1	-	4	3.5
IT – 307	Computer Networks	3	1	-	4	3.5
MAT-301	Mathematics-V	3	1		4	3.5
IT – 311	Algorithms Pr			2	2	1
IT – 313	Software Engineering Pr	-	-	3	3	1.5
IT – 315	Microprocessors Pr	-	-	2	2	1.0
IT – 317	Operating System Pr	-	-	3	3	1.5
IT – 319	Seminar	-	-	2	2	1.0
IT – 321	Training viva	-				2
Total		15	5	12	32	23.5

B Tech 5th Semester (Information Technology)
IT-301 Design and Analysis of Algorithms

L	T	P
3	1	

1. Basics of Algorithm Analysis & Design
Stacks, queues, trees, heaps, sets and graphs. Algorithm Definition, Analyzing algorithms, order arithmetic, time and space complexity. [1,2]

2. Algorithm Design Techniques
Divide and Conquer: general method, merge sort, selection problem, other applications of divide & conquer [1]

3. Greedy method
Job Sequencing, Knapsack problem, optimal merge patterns, minimum spanning trees & other applications of Greedy method [1]

4. Dynamic Programming
Use of table instead of recursion, all pair shortest Path, 0/1 knapsack, optimal binary search tree, traveling salesperson problem & other applications of Dynamic programming [1]

5. Search and Traversal
Search techniques: breadth first search, depth first search, code optimization, Internal and External sorting, searching and merging techniques [1]

6. Backtracking
8 queens problem, sum of subsets, graph coloring, knapsack problem & other applications of Backtracking [1]

7. Branch and Bound
0/1 knapsack problem, traveling salesperson problem. Lower Bound Theory: Comparison trees for sorting and searching, Oracles and adversary arguments, techniques for algebraic problems [1]

8. Problem clauses
NP, NP- Hard and NP-complete, deterministic and non-deterministic polynomial time algorithm, approximation and algorithm for some NP complete problems.Introduction to parallel algorithms, Genetic algorithms. intelligent algorithms [1,2]

BOOKS
1. Horowitz, Ellis and Sahni, Sartaj: Fundamentals of Computer Algorithms, 2/e Galgotia Publications
2. Cormen, Leiserson and Rivest: Introduction to Algorithms, 2/e, PHI.
3. Aho, Hopcroft, and Ullman: The Design and Analysis of Computer Algorithms, 2/e Addison Wesley.

B Tech 5th Semester (Information Technology)
IT-303 Software Engineering

L   T   P
3   1

1. Introduction
Introduction to Software crisis & Software processes; Software life cycle models - Build & Fix, waterfall, incremental, prototype evolutionary, spiral model, Unified process. [1]

2. Requirement Analysis & Specifications
Requirements engineering, types of requirements, feasibility study, requirement elicitation, anlayisi, documentation, validation, management, case study [1]

3. Software Project Planning
Size estimation, cost estimation, COCOMO, COCOMO II, Putnam model, risk management [1]

4. Software Design
Design, modularity, strategy of design, function oriented design, object oriented design [1]

5. Software Metrics
Introduction, token count, data structure metrics, IF metrics, O-O metrics, size metrics, data structure metrics, information flow metrics, entropy-based measures, metric analysis. [1]

6. Software Reliability
Basic concepts, software quality, reliability models, Capability Maturity Models, ISO 9000 [1]

7. Software Testing
Introduction, functional testing, structural testing, levels of testing, debugging, testing tools. [1]

8. Software Maintenance
Introduction, types of maintenance, maintenance models, reverse engineering, re-engineering. [1]

BOOKS
1. K.K.Aggarwal, Yogesh Singh: Software Engineering, New Age International Ltd, 3rd Ed, 2008.
2. Pankaj Jalote, An Integrated Approach to Software Engineering 3rd Ed, Narosa Publishing, 2005.
3. R.S. Pressman, Software Engineering – A Practitioner's Approach, 6th Ed, TMH, 2007.
4. Ian Sommerville, Software Engineering, 5th Ed., Addison Wesley, 2006.

B Tech 5th Semester (Information Technology)
IT-305 Microprocessors

L   T   P
3   1

1. 8086 Architecture
CPU architecture, pin out & signal descriptions, internal operation, machine language instruction, instruction execution time, addressing modes, physical address computation, minimum & maximum mode configuration[1,4]

2. Assembly Language Programming
Assembler, instruction format, assembler directives, data transfer instruction, arithmetic instructions, branch instruction, NOP & HLT instructions, flag manipulation instruction, logical instruction, shift and rotate instruction, directions and operators. [1,4]

3. I/O Interface
Serial communication, asynchronous, synchronous, physical, 8251 A, Parallel communication 8255 A, DMA controllers, 16-bit bus interface. [1,4]

4. Pentium Architecture
Basic architecture of P II/ P III, Memory management models, registers and flags.
Basic data types in P II/ P III, addressing modes, instruction format and types, instruction set and prefixes. [2]

5. Memory Management & advanced Concepts
Modes of operation of P II/ P III – real, protected and virtual,superscalar architecture.
Branch prediction, MMX – register and instruction set, interrupt handling. [2]

BOOKS
1. Liu and Gibson, Microcomputer Systems: 8086/8088 family: Architecture, Programming and Design, PHI.
2. Bray, Intel Microprocessors, The 8086/8088, 80186/80188, 80286, 80386, 80486, Pentium & Pentium Processor - Architecture, Programming and Interfacing, PHI
3. Intel, Pentium Processor Data Handbook, Intel, 1999.
4. A. K. Ray & K.M. Bhurchandi, Advanced Microprocessors and Peripherals: Architecture, Programming and interfacing, TMH
5. D.V. Hall, Microprocessors and Interfacing, TMH.

B Tech 5th Semester (Information Technology)
IT-307 Computer Networks

L T P
3 1

1. Introduction
Network Functions, Network Topology, Network Services, Switching Approaches, Transmission media and systems, multiplexing and signaling techniques, Error detection and correction, ISDN and BISDN.[1]

2. Layered Architectures
Examples, OSI Reference Model, Overview of TCP/IP architecture, Socket system calls, SNMP, Electronic Mail.[1]

3. Peer-to-Peer Protocols
Protocols, Service Models and End-to-End requirements, ARQ, Sliding Window, RTP, HDLC, PPP protocols, Statistical Multiplexing.[1]

4. MAC and LAN Protocols
Multiple access communication, Random Access-ALOHA, Slotted-ALOHA, CSMA, CSMA-CD, Channelization – FDMA, TDMA, CDMA, Channelization in Cellular networks LAN Standards - 802.3, 802.4, 802.5, 802.6, FDDI, 802.11, LAN Bridges.[1]

5. Packet Switching Networks
Packet network topology, Datagrams and Virtual Circuits – Structure of Switch / Router, Connectionless and Virtual Circuit packet Switching, X.25, Routing Algorithms, Traffic management and QoS – FIFO, Priority Queues, Fair Queuing, Congestion Control techniques.[1]

6. TCP/IP
Architecture, Internet protocols – IP packet, Addressing, Subnet addressing, IP routing, CIDR, ARP, RARP, ICMP, Reassembly, UDP, Transmission Control Protocol – TCP, Reliable stream service, operation, protocol.[1]

Books.

1. Leon Garcia and Indra Widjaja: Communication Networks – Fundamental Concepts and Key Architectures, TMH, 2000.
2. A.S. Tanenbaum: Computer Networks, 3/e, PHI, 1997.
3. Forouzan, Coombs and Fegan: Introduction to data Communications and Networks, TMH, 1999.
4. William Stallings: Data and Computer Communication 5/e. PHI.

B Tech 5th Semester (Information Technology)
MAT-301 Mathematics -V

	L	T	P
	3	1	

PART –A

1. Finite-Differences

Finite differences, Difference operators, Newton's forward and backward Interpolation formulae, Bessel's formulae and Stirling's Formulae, Lagrange's interpolation, formula for unequal interals, Numerical differentiation, Numerical integration: Trapezoidal rule, Simpson's1/3 rule.

2. Differences Equations

Formation of difference equations, Solution of homogenous and non-homogenous with constant coefficients linear difference equations.

3. Numerical solution of ordinary differential equations

Picard's method, Euler's method, Runga Kutta method, Milne's predictor-corrector method.

PART-B

4. Statistical Method:

Binomial distribution, Poisson distribution and Normal distribution with their properties and application.

5. Operational Research:

Linear programming problems formulation, solving linear programming problems using i) Graphical Methods ii) Simplex Method iii) Dual Simplex Method

PART-C

6. Sets and Propositions

Introduction, Combination of sets, Finite and Infinite sets, Uncountably Infinite Sets, Mathematical Induction, Principle of Inclusion and Exclusion, Multisets, Properties of Binary Relations, Equivalence Relations and Partitions, Partial Ordering Relations, Functions and Pigeonhole Principle, Propositions.

7. Graphs and Planar Graphs

Introduction, Basic Terminology, Multigraphs and Weighted Graphs, Paths and Circuits, Shortest Paths in Weighted Graphs, Eulerian Paths and Circuits, Hamiltonian Paths and Circuits, Planar Graphs, Trees, Rooted Trees, Path Lengths in Rooted Trees, Binary Search Trees, Spanning Trees And Cut-sets, Minimum Spanning Trees, Recurrence Relations, Linear Recurrence Relations with Constant Coefficients.

NOTE TO PAPER SETTER:

Set 8 questions in all, 2 from part A, 2 from part B, 4 from part C. Candidates have to attempt 5 questions selecting atleast 1 question from each part.

BOOKS

1. Numerical Mathematics Analysis : IB Scarborough
2. Numerical Methods for Scientific & Engineering computation : M.K. Jain, S.R.K Iyengar, R.K. Jain
3. Operational Mathematics : : R.Churchill
4. C.L. Liu : Elements of Discrete Mathematics
5. Kenneth Kalmanson: An Introduction to Discrete Mathematics and its Applications. Addison Wesley Publishing Co., 1986.
6. J.P. Tremblay : Discrete Mathematics Structures with Application to Computer Science. McGraw Hill, N.Y., 1977.

B Tech 5th Semester (Information Technology)
IT-311   Algorithms Pr

L T P

- - 2

1. Implement the minimum cost spanning tree algorithm.
2. Implement the single source shortest path algorithm.
3. Implement the algorithm for optimal binary search tree.
4. Implement the algorithm for Job sequencing with deadlines.
5. Implement the algorithm for sum of subsets problem.
6. Implement the algorithm for travelling sales person problem.
7. Implement the algorithm for knapsack problem.
8. Implement the algorithm for n-queen problem.
9. Implement the algorithm for graph coloring.
10. Implement the algorithm for all pair shortest path

B Tech 5th Semester (Information Technology)
IT-313   Software Engineering Pr

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L  T   P
-  -   3
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Note:- Implement the following programs using C.

1. Implement Halstead's equation to compute various science metrics like volume etc, language level, estimated program length, effort and time in a program.
2. Compute average number of live variables per statement in a program.
3. Compute average life of variables in a program.
4. Compute psychological complexity of a program.
5. Compute McCabe's cyclomatic complexity of a program and generate its control graph.
6. Use some CASE tool for identifying various phases of software engineering, generate SRS document, design document like DFD and ER diagram, test cases generation for result automation, engineering admission automation (seat allocation during counseling).

B Tech 5th Semester (Information Technology)
IT-315   Microprocessors Pr

L   T   P

-    -   2

1. Write a program to print the alphabets.
2. Write a program to read a integer number of max (16 bit), store that number in a register and display it digit by digit.
3. Repeat exercise 2 for 32 bit number.
4. Write a program to find factorial of a number, where result does not exceed 32 bit. Use procedure to calculate factorial and pass parameters
5. Write modular program to perform addition, subtraction, multiplication and division of two 16-bit numbers.
6. Repeat exercise 5 for two 32-bit numbers
7. Sort n numbers using modular program.
8. Check whether a given string is palindrome or not.
9. Reverse an input string.
10. Merge two sorted list of integers
11. Using int 10h, change the size of cursor, change the position of the cursor based on user's choice.
12. Write some programs, which use multiple data segments and multiple code segments. Do these programs by defining different segments in different files and link all of them to get the desired output.

B Tech 5th Semester (Information Technology)
IT-317 Operating System Pr

	L	T	P
	-	-	3

1. Study of H/W & S/W requirement of different operating system.
2. Implementation of contiguous, linked and indirect allocation strategies assuming randomly generated free space list
3. Implementation of worst, best & first fit for contiguous allocation assuming randomly generated free space list.
4. Implementation of Compaction for the continually changing memory layout & calculate total movement of data.
5. Calculation of external & Internal fragmentation for different program & for different page size.
6. Implementation of resource allocation graph.
7. Implementation of Banker's algorithm.
8. Conversion of response allocation graph to wait for graph
9. Implementation of Bernstein's condition for concurrency
10. Implementation of Fork & Join Construct.
11. Implementation of "Semaphore" for concurrency.
12. Study of system calls and various OS management services in Unix/Linux OS and their implementation.

Bachelor of Technology (Information Technology)
Scheme of Courses (6th Semester)
w.e.f Session 2008-09

Course No.	Subject	Teaching Schedule				Credits
		L	T	P	Tot	
IT – 302	UML & Object Oriented Analysis and Design	3	1	-	4	3.5
IT – 304	Software Quality Assurance	3	1	-	4	3.5
IT –306	Automata Theory	3	1	-	4	3.5
IT – 308	Elective-1	3	1	-	4	3.5
HUT-311	Business Management	3	1	-	4	3.5
IT 312	Computer Network Pr	-	-	3	3	1.5
IT – 314	Advanced Pr-1	-	-	3	3	1.5
IT – 316	Visual Programming and Server Side programming Pr	-	-	3	3	1.5
HUT-322	Soft skills Workshop	-	3	-	3	2.0
Total		15	3	9	31	24.0

List of Electives
1. IT-141   Information Security
2. IT-142   Advanced Databases
3. IT-143   VHDL

B. Tech 6th Semester (Information Technology)
IT-302 UML & Object Oriented Analysis and Design

	L	T	P
	3	1	

1. Review of Object Oriented Systems
Design Objects, Class hierarchy, inheritance, polymorphism, object relationships and associations, aggregations and object containment, object persistence, meta-classes, Object-oriented systems development life cycle, Software development process Object Oriented systems development: a use-case driven approach.[1,2]

2. Methodology for Object Oriented Design
Object modeling technique as software engineering methodology, Rumbaugh methodology, Jacobson Methodology, Booch Methodology, Patterns, Frameworks, the unified approach, unified modeling language (UML). [1]

3. Unified Modeling language
Introduction, UML diagrams, UML class diagrams, Use Case diagrams, UML dynamic modeling, Packages and model organization, UML extensibility, UML meta model. [1]

4. Object Oriented Analysis
Analysis Process, Use-Case Driven Object Oriented Analysis, Use-Case Model, Object Classification, Theory, Different Approaches for identifying classes, Classes, Responsibilities and Collaborators, Identifying Object Relationships, Attributes and Methods, Super-sub Class Relationships, A-Part of Relationships-Aggregation, Class Responsibilities, Object Responsibilities. [1,2]

5. Object Oriented Design
Object oriented design process, corollaries, design axioms, design patterns, object oriented design philosophy, UML Object Constraint Language, Designing Classes: The Process, Class Visibility, Refining Attributes, Designing Methods and Protocols, Packages and Managing classes, Designing Interface Objects, View layer interface design, Macro and Micro level interface design process. [1,2]

BOOKS

1. Ali Bahrami, Object Oriented Systems Development, McGraw Hill, 1999.
2. Rumbaugh et. al., Object Oriented Modeling and Design, PHI, 1997.
3. Wendy Boggs, Michael Boggs, Mastering UML with Rational Rose, Sybex BPB Publications, 2007.
4. Alan Dennis, B H Wixom, D Tegarden, Systems Analysis & Design with UML version 2.0 An Object Oriented Approach, 2nd Edition, Wiley India, 2007.

B. Tech 6th Semester (Information Technology)
IT-304 Software Quality Assurance

L	T	P
3	1	

1. **Product Quality & Process Quality:** Introduction, software system evolution, product quality, models for software product quality, process quality. [1]

2. **Functional Testing:** Boundary Value Testing: Analysis, robust testing, worst case testing, special & random testing, examples-; Equivalence Class Testing- equivalence classes, examples; Decision Table Based Testing: decision tables with examples. [2]

3. **Structural-Testing:** Path testing: DD-Paths, Metrics, basic path testing; Data Flow Testing:, DU testing, slice based testing; Mutation testing. [2]

4. **Integration & System Testing:** levels of testing; integration testing: decomposition based, call graph based & path based integration; System testing: threads based structural & functional testing. [2]

5. **Object Oriented Testing:** Some issues in Object Oriented Testing, Units for object-oriented testing, implications of composition and encapsulation, implication of inheritance, implication of polymorphism, levels of object-oriented testing [2]

Text Books:

1. N.S. Godbole, "Software Quality Assurance Principles & Practice", Narosa Publications. 2005
2. Paul C Jorgensen, "Software Testing A Craftsman's Approach", 2nd Ed., CRC Press 2002
3. Boris Beizer, "Software Testing Techniques", Second Edition, Wiley India, 2005.
4. William Perry, "Effective Methods for Software Testing", 3rd Edition, Wiley India, 2006.
5. Cern Kaner, Jack Falk, Nguyen Quoc, "Testing Computer Software", Second Edition, Van Nostrand Reinhold, New York, 1993.
6. Louise Tamres, "Software Testing", Pearson Education Asia, 2002

B. Tech 6th Semester (Information Technology)
IT-306   Automata Theory

L	T	P
3	1	

1. Introduction
Introduction to Finite State Machine, Moore and Mealy FSMs, Equivalence, Regular Languages, Regular expressions, The memory required to recognize a language, Distinguishing one string from another, unions, Intersections and Complements, Finite automata, NFA, NFA with null transitions, Equivalence, Criterion for Regularity, Minimal Finite Automata, The pumping lemma, decision problems, Finite automata, Non-determinism and Kleen's Theorem. Regular and Non-regular languages. [1]

2. Context-Free Language
Context – Free Grammars, Definition of CFG, example of familiar languages, unions, concatenations and closures of CFLs, Derivation Tree, Ambiguity, unambiguous CFG for algebraic expressions, Simplified forms and normal forms, Push down automata, definition, deterministic PDA, PDA to CFG and Vice Versa, Parsing. Context Free and Non Context Free Languages, Pumping lemma for CFG, Intersection and complements of CFL. [1]

3. Turing Machines
Definition, Turing Machining as Language acceptors, combining TM, computing Partial Function with TM. Recursively Enumerable and Recursive Languages, Regular Grammars, context Sensitive grammars, Chomsky Hierarchy, Concept of unsolavability & reducibility, Halting Problem, Post correspondence Problem, Rice theorm[1]

4. Computability
Primitive Recursive Functions, Primitive Recursive Predicates and some bounded operations, unbounded minimalization and recursive functions, Godel Numbering, Non-numeric functions.Growth rates of functions, Time and space complexity of TM, complexity Classes P and NP Polynomial-Time, Reductions and NP-Completeness, Cook's Theorem. [1]

BOOKS
1. John C. Martin: Introduction to Languages and the Theory of Computation, MGH,
2. Lewis & Papadimitriou: Elements of the Theory of Computation, PHI,
3. Daniel I.A. Cohen: Introduction to Computer Theory: John Wiley.
4. J.E. Hopcroft and J.D. Ullman: Introduction to Automata Theory Languages and Computation, Narosa.

B. Tech 6th Semester (Information Technology)
IT-141   Information Security

L	T	P
3	1	

1. Introduction
Meaning of security ,attacks ,Computer Criminals ,Methods of defense [1]

2. Elementary Cryoptgraphy
Introduction, Substitution ,ciphers,Transpositions ,Data encryption standard,AES Encryption Algorithm,Public key Encryption ,Uses of Encryption. [1]

3. Program Security
Secure program, Non Malicious program errors ,Viruses and other malicious code, Targeted malicious code, Control against program. [1]

4. Protection in General Purpose Operating System
Overview, file protection mechanisms ,user authentication, designing trusted operating system, security policy ,models of security, trusted operating system design[1]

5. Database Security &Security in Networks
Introduction to database, security requirements, reliability and integrity, sensitive data,inference,multileveldatabase,network security network,concepts,threats in networks networks ,security controls, firewalls ,intrusion detection system, secure email[1]

6. Administering Security
Risk analysis ,legal, Privacy& Ethical issues, Computer Security: Protecting Programs and data[1]

BOOKS
1. Charles P.Pfleeger ,Share Lawrence Pfleeger: Security in Computing, Pearson Education, 3/e.
2.Charlie Kaufman, Perlman & S Peeciner: Network Security , Pearson Education. 2/e.

B. Tech 6ᵗʰ Semester (Information Technology)
IT-142   Advanced Databases

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L  T  P
3  1  —
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1. Parallel & Distributed Data bases

Architecture for parallel databases, Parallel query evaluation, parallel zing individual operations, parallel query optimization; Introduction to distributed databases, distributed DBMS architectures, storing data in a distributed DBMS, distributed catalog management, distributed query processing, updating distributed data, introduction to distributed transactions, distributed concurrency control, recovery.

2. Data Mining

Introduction, counting co-occurrences, mining for rules, tree structured rules, clustering, similarity search over sequences.

3. Object Database Systems

User defined ADT, structured types, objects & reference types, inheritance, design for an ORDBMS, challenges in implementing an ORDBMS, OODBMS, comparison of RDBMS with OODBMS & ORDBMS.

4. Advanced Topics

Advanced transaction processing, integrated access to multiple data source, mobile databases main memory databases, multimedia databases, GIS, temporal & sequence databases.

BOOKS

1. R. Ramakrishnan & J. Gehrks Database Management Systems MGH, International Ed., 2000.
2. Korth, Silberschatz, Sudershan: Data Base concepts, MGH, 2001.
3. C. J. Date, Database Systems, 7th Ed., Addison Wesley, Pearson Education, 2000.

B. Tech 6th Semester (Information Technology)
IT-143 VHDL

L	T	P
3	1	-

1.Introduction to HDL: Design Flow, Design Methodologies, HDL History, Capabilities, Hardware Abstraction, Basic Terminology, Model Analysis, Comparison between VHDL and Verilog.[1]

2.Basic VHDL Elements: Identifiers, Data objects,Data Types, Operators. [1,2]

3.Behavioral Modeling: Entity declaration, architecture body, Various Sequential Statements and Constructs, multiple processes, postponed processes. [1]

4.Dataflow Modeling: Concurrent Signal Assignment Statements, delta delay model, multiple drivers, block statement, concurrent assertion statement. [1]

5.Structural Modeling: Component Declaration, component Instantiation, resolving signal values. [1]

6.Supporting Constructs: Generics and Configuration, Subprograms and Overloading, Operator overloading, Package declaration, package body, design Libraries, visibility. [1,2]

7.Advanced Features: Generate statements, qualified expressions, type conversions, guarded signals, attributes, aggregate targets. [1]

8.Programmable Logic Devices (PLD) and Field Programmable Gate Arrays (FPGA): Basic Concepts, Architecture and Usage. [1,2]

9.Combinational Logic Design: Adders/Subtractors, ALU, Multipliers, Shifters. [1,2]

10.Sequential Logic Design: Synchronous Sequential Circuits, Asynchronous Sequential Circuits. [1,2]

Books

1.J.Bhasker, A VHDL- Primer, 2/e PHI.

2.Fundamentals of digital logic design with VHDL 2/e TMH.

3.D. Perry , VHDL, 3rd Ed.- TMH

4.Skahil, VHDL for Programmable logic- 2nd Ed – Wiley.

B Tech 6th Sem (Information Technology)
HUT-322   Soft Skills Workshop

L T P
- 2 -

The course is framed to develop soft skills of students to a level when they can communicate effectively in professional and social situations orally as well as in writing. Keeping in mind the wide variation in the backgrounds of participating students, the contents and the approach have been kept flexible and may be modified by the teachers to suit individual needs.

Introduction to the process of communication; types of communication: common barriers and their remedies. Verbal and non-verbal communication; common errors in usages and syntax: figurative use of language. Learning pronunciation, stress and intonation through language lab. Body language – its importance and effective use in verbal communication.

Writing technical papers and reports for publication. Preparation of reports/papers for oral presentation – common errors and misconceptions especially in power point presentation. Handling questions.

Group discussion: dos and don'ts for participation in a GD. Preparing a CV/Resume and writing a job application. The art of interview performance.

B. Tech 6th Semester (Information Technology)
IT-312 Computer Network Pr

L T P
3

1. Study of various topologies of Network
2. RJ-45 connector and its circuit diagram
3. BNC connector and its circuit diagram
4. Thick & Thin coaxial cable
5. CKT diagram of terminator
6. CKT diagram of T-connector
7. Study of different type of cable in designing (10 base 7, 10 base 2, 10 base 5, UTP OFC)
8. CKT diagram of network interface card.
9. Study of bridge, router, hub, gateways.
10. Layout of Installation of LAN with S/W & H/W requirement.

B. Tech 6th Semester (Information Technology)
IT-314 Advanced Pr -1

L   T   P
            3

NOTE: In Advanced Pr-1 some practicals based on other papers offered in this semester and/or following UML based practicals will be performed, as per department's resources and students' needs.

Implement the following programs using UML Notations
1. Create an ATM system model including all object diagrams.
2. Create a use case diagram for order processing system.
3. Create a model to study message transfer between objects.
4. Create sequence & collaboration diagram to add a new order in order processing system.
5. Take the classes created in above programs and group them into packages.
6. Study the concept of addition of attributes to the classes designed above.
7. Study the concept of relationship between classes that participate in the Enter New Order use case.

B. Tech 6th Semester (Information Technology)
IT-316 Visual Programming& Server Side Programming Pr

L   T   P
3

1. Write a Program using ASP to check whether a folder exists on a server or not.
2. Write a Program using ASP Get File method is used to find out information about a given file.
3. Write a Program using ASP for HTTP screen-scraping and caching.
4. Write a Program using ASP to display the information after submission from user.
5. Write a Program using Java Servlet that print simple message.
6. Write a Program using Java Servlet that display information concerning an HTTP request and server environment in which Servlets is executing.
7. Write a Program using Java Servlet that display the no. of time a page has been accessed.
8. Write a Program using Java Servlet that displays the list of recommended books of a particular author.
9. Write a Program using Java Servlet that displays the list of recommended product of a particular company.
10. Write a Program using Java Servlets that creates a table of the cookies associated with the current page.
11. Write a Program using Java Servlet that takes a search string, number of results per page and a search engine name, sending the query to that search engine.
12. Write a Program using Servlet that creates a table of the cookies associated with the current page
13. Write a Program using Servlet that sets six cookies: three that apply only to the current session (regardless of how long that session lasts) and three that persist for an hour (regardless of whether the browser is restarted).
14. Write a Program using Servlet to implement Filter that prints a report in the log file whenever the associated Servlets or JSP pages are accessed.
15. Write a Program using Servlet to implement Filter that refuses access to anyone connecting directly from or following a link from a banned site.

Books:-

1. Jason Hunter & William Crawford, Java Servlets Programming, O Reilly,2nd Edition, 2001.
2. Marty Hall, Larry Brown and Yaakov Caikin ,Core Servlets and JSP, 2nd Edition.
3. Marty Hall, More Servlets and JSP
4. Keith Morneau & Jill Batistick ASP Web Warrior Series 1st Edition.
5. Manuel Alberta Ricart & Stephen Asbury ASP 3 Developer's Guide
   Hungry Minds Papvedr Edition.

Item 12.6   To note the admission status of various UG/PG Courses for the Academic Session 2008-2009 at National Institute of Technology, Kurukshetra.

From the session 2008-2009 onwards the Institute has seven B.Tech degree courses and 17 post- graduate courses besides the degree leading to Doctor of Philosophy (Ph.D) The admission/registration of students for the session 2008-09 is as follows:

A. Under Graduate (B. Tech)

Sr. No	Name of Course	Admission
1.	Civil Engineering	103
2.	Computer Engineering	75
3.	Electrical Engineering	100
4.	Electronics & Communication Engg.	113
5.	Industrial Engg. & Management	70
6.	Information Technology	66
7.	Mechanical Engineering	105
	Total	632

= 603+29* (DASA & MEA) = 632

Numbers include *DASA (i.e. Direct admission of students from Abroad) & MEA (i.e. Ministry of External Affairs) category students also

The Admission status of all PG Courses is given bellow:-

B. Post Graduate (M.Tech./ MBA/ MCA)

Sr. No	Department	Name of Course	Admission	
1.	Civil Engg.	Soil Mechanical & Foundation Engg.	02	10
		Structural Engg.	08	
2.	Electrical Engg.	Control System	16	50
		Power System	15	
		Power Electronics & Drives	19	
3.	Electronics Engg.	Electronics & Comm. Engg.	17	34
		VLSI	17	
4.	Mechanical Engg.	Industrial Production Engg.	16	52
		Machine Design	18	
		Thermal	18	
5.	Physics	Instrumentation	17	33
		Nano- Technology	16	
6.	Business Admn.	Master Business Administration		67
7.	Computer Applications	Master of Computer Application		61
		Total =		307

C. Ph. D. (Registration From 15.11.2007 to 31.12.2008)

Sr. No	Name of Departments	No. Registration
1.	Chemistry	01
2.	Civil Engg.	01
3.	Computer Engineering	01
4.	Electrical Engg.	04
5.	Electronics & Comm. Engg.	06
6.	Humanities & Social Science	05
7.	Mathematics	01
8.	Mechanical Engg.	25
9.	Physics	0
10.	MBA	02
	Total	46

Full-time = 01
Part-time = 45
This is for kind information and record of the Senate

Item 12.7 To consider approval for students to be awarded degrees in the 6th Convocation scheduled to be held on 28th January, 2009

The candidates who have qualified to be eligible for the award of Degrees in various programmes of B.Tech., M.Tech., MBA and Ph.D. at NIT, Kurukshetra are placed at Appendix 12.7 from page 164 to 186. The eligibility has been ascertained with the date of present meeting as the cut-off date.

A summary showing number of students who have graduated and post graduated in respective disciplines is given below:

BACHELOR OF TECHNOLOGY

Sr. No.	Discipline	Number of Students
1.	Civil Engineering	44
2.	Computer Engineering	33
3.	Electrical Engineering	65
4.	Electronics & Comm. Engg.	80
5.	Mechanical Engineering	70

MASTER OF TECHNOLOGY

Sr. No.	Discipline	Number of Students
1.	Civil Engineering	
	(i) Transportation Engg.	01
2	Electrical Engineering	
	(i) Control System	07
	(ii) Power System	08
	(iii) Power Electronics & Drives	04
3.	Electronics & Communication Engg.	12
4.	Instrumentation	14
5.	Nano-Technology	07
6.	Mechanical Engineering	08
	CAD/CAM	07
	Robotics & Automation	10

MASTER OF BUSINESS ADMINISTRATION (M.B.A.)

Sr. No.	Discipline	Number of Students
1.	Master of Business Administration	59

DOCTOR OF PHILOSOPHY (Ph.D)

S.No.	Discipline	No. of Students
1.	Mathematics	01
2.	Mechanical	04
3.	Civil	02
4.	Chemistry	01
5.	Physics	03

The Senate may consider and approve the award of Degrees to the students.

B. Tech. Civil Engineering

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name	division div
1	120/04	Arun Kumar Ahuja	अरुण कुमार अहुजा	Rajendra Kumar Ahuja	राजेंद्र कुमार अहुजा	
2	139/04	Ganesh K.	गणेश के०	Krishnamurthy A.	कृष्णमूर्ति ए०	
3	179/04	Partha Sarathi	पार्थ सारथी	R.C. Bhattacharya	आर०सी० भट्टाचार्य	
4	185/04	Rahul Sharma	राहुल शर्मा	Hitapendar Kumar Sharma	हितेन्द्र कुमार शर्मा	
5	237/04	Gunjan Gogneja	गुंजन गोगनेजा	Satish Gagneja	सतीश गगनेजा	
6	239/04	Vinam Gupta	विनम गुप्ता	Vinu Chandra Gupta	विनु चन्द्रा गुप्ता	
7	340/04	Chandramohan Mishra	चन्द्रमोहन मिश्रा	Vinay Kumar Mishra	विनय कुमार मिश्रा	
8	268/04	Anurag Mishra	अनुराग मिश्रा	Rajeev Narayan Mishra	राजीव नारायण मिश्रा	
9	271/04	Anshul Bansal	अंशुल बंसल	Jagdish Chand Bansal	जगदीश चन्द बंसल	
10	274/04	Rinesh Anand	रिनेश आनन्द	Ajay Kumar Sinha	अजय कुमार सिन्हा	
11	276/04	Ish Kumar	ईश कुमार	Ashok Kumar	अशोक कुमार	
12	277/04	Patil Harshad Bhagoji	पाटिल हर्षद भागोजी	Bhagoji K. Patil	भागोजी के० पाटिल	
13	280/04	Binit Kumar Dubey	बिनीत कुमार दुबे	Kamlesh Kumar Dubey	कमलेश कुमार दुबे	
14	283/04	Love Goel	लव गोयल	Ajay Goel	अजय गोयल	
15	284/04	Arun Kumar	अरुण कुमार	Megh Raj	मेघ राज	
16	285/04	Jayaverdhan Nayak	जयवर्धन नायक	Anurudra Nayak	अनुरुद्र नायक	
17	288/04	Amankeg	अमनकेग	Dalkahau		
18	290/04	Ravi Kumar Macheru	रवि कुमार मछेरु	Maheswara Rao	महेश्वरा राव	
19	293/04	Amina Jaggi	अमिना जग्गी	A. K. Jaggi	ए० के० जग्गी	
20	297/04	Pudipeddi Ramakanth	पुडिपेडी रामाकान्त	P. Suryanarayana	पी० सुर्यनारायण	
21	298/04	Bansuru Bauri	बंसुरी बौरी	Balarem Bauri	बलराम बौरी	
22	109/04	Mangesh Gidkotwar	मंगेश गिडकोटवार	Ramesh Gidkotwar	रमेश गिडकोटवार	
23	105/04	K. Lokesh	के० लोकेश	V. Mala Kumar	वी० माला कुमार	
24	106/04	Sachin Garg	सचिन गर्ग	S. P. Garg	एस० पी० गर्ग	
25	109/04	Shekhar Tandon	शेखर टंडन	Vijay Kumar Tandon	विजय कुमार टंडन	
26	112/04	Anna Manjul	अन्ना मंजुल	Raj Pal	राज पाल	
27	115/04	Priyanwada Navet	प्रियंवदा नवेत	Prem Singh Navet	प्रेम सिंह नवेत	
28	118/04	Sneha Kumar	स्नेहा कुमार	Jai Prakash Lal	जय प्रकाश लाल	
29	119/04	Nikhil Gupta	निखिल गुप्ता	R. L. Gupta	आर० एल० गुप्ता	
30	120/04	Neha	नेहा	Prem Chand	प्रेम चन्द	
31	122/04	Vaishali Bansal	वैशाली बंसल	J. R. Bansal	जे० आर० बंसल	
32	124/04	Hemant	हेमन्त	Hari Narayan Thakur	हरि नारायण ठाकुर	
33	125/04	Ashish Mittal	आशिष मित्तल	Shiv Shankar Mittal	शिव शंकर मित्तल	
34	127/04	Upkar Goyal	उपकार गोयल	Shiv Kumar Goyal	शिव कुमार गोयल	
35	128/04	Varun Dutta	वरुण दत्ता	Kishor Mohan Dutta	किशोर मोहन दत्ता	

36	133/04	Nishant Bhatia	निशान्त भाटिया	Parmuda Ram	परमिन्द राम		
37	135/04	Gulshan Kumar	गुलशन कुमार	Ashok Kumar	अशोक कुमार		
38	137/04	Rahul Raghavan	राहुल राघव	T. Raghavan	टी. राघवन		
39	180/03	Saurabh Ahlawat	सौरभ अहलावत	Shri Ram Ahlawat	श्री राम अहलावत		
40	275/03	Inban	इनबा	Ravinder Bansal	रविन्द्र बंसल		
41	285/03	N. Raman	एन. रमन	N. Narayanan	एन. नारायणन		
42	286/03	Ankit Rathi	अंकित राठी	Damodar Das Rathi	दामोदर दास राठी		
43	2K2040	Sumit Kumar	सुमित कुमार	Sai Prakash	साई प्रकाश	1 a	प्रभा
44	2K2285	Sachin Sukhija	सचिन सुखीजा	Gurmukh Sukhija	गुरमुख सुखीजा		

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Sr_No	Roll_No	Name	Hindi Name	Father's Name	Hindi F_Name	division	div
1	01/04	Varnika Gupta	वर्णिका गुप्ता	P. K. Gupta	पी० के० गुप्ता		
2	03/04	Arpita Shrivastava	अर्पिता श्रीवास्तव	Raghuver Sahay	रघुवीर सहाय		
3	04/04	Santanu Saha	शान्तनु साहा	Sujal Saha	सुजल साहा		
4	07/04	Suresh Kumar Yaraushen	सुरेश कुमार यारावशेन	Shiromoti	शिरोमुद्रा		
5	08/04	Rahit Bhat	रोहित भट	Hira Lal Bhat	हीरा लाल भट		
6	09/04	Vikramjeet Singh Chaudhary	विक्रमजीत सिंह चौधरी	Karnel Singh	करनल सिंह		
7	10/04	Prank Agrawal	प्रांक अग्रवाल	Rajiv Agrawal	राजीव अग्रवाल		
8	11/04	Alka Soni	अलका सोनी	Ashok Kumar Thakur	अशोक कुमार ठाकुर		
9	12/04	Nitin Mahesh	नितिन महेश	Mahesh Chandra	महेश चन्द्र		
10	13/04	Komal Arora	कोमल अरोड़ा	Pawan Kumar	पवन कुमार		
11	15/04	Mayank Bhargava	मयंक भार्गव	Rakesh Bhargava	राकेश भार्गव		
12	17/04	Ranjan Malakar	रंजन मलाकार	Tarak Malakar	तारक मलाकार		
13	18/04	Sanjeev Marwah	संजीव मरवाह	Avinash Chandra	अविनाश चन्द्र		
14	19/04	Akhil Jain	अखिल जैन	Rajender Jain	राजेन्द्र जैन		
15	20/04	Varun Vijayvargiya	वरुण विजयवर्गीय	Ajay Vijayvargiya	अजय विजयवर्गीय		
16	23/04	Kuldeep	कुलदीप	Ishwar Singh	ईश्वर सिंह		
17	24/04	Anurag Goyal	अनुराग गोयल	K. C. Goyal	के० सी० गोयल		
18	25/04	Nikhil Taneja	निखिल तनेजा	Pradeep Taneja	प्रदीप तनेजा		
19	28/04	Anuj Jain	अनुज जैन	Subhash Chander	सुभाष चन्द्र		
20	29/04	Karthik U.	कार्तिक उ०	Uttamon K.	उत्तमन के०		
21	31/04	Shreya Sharma	श्रेया शर्मा	Madan Lal	मदन लाल		
22	32/04	Shreya Nagpal	श्रेया नागपाल	Rajiv Nagpal	राजीव नागपाल		
23	98/04	Kshiraj Shukla	क्षितिज शुक्ला	M. K. Shukla	एम० के० शुक्ला		
24	108/04	Manu Dawar	मनु दवर	H. R. Dawar	एच० आर० दवर		
25	116/04	Anurag Garg	अनुराग गर्ग	Raj Kumar	राज कुमार		
26	118/04	Shailender Arya	शैलेन्द्र आर्य	Narender Arya	नरेन्द्र आर्य		
27	137/04	Ann Gunn	एन्न गुप्ता	Virender Kumar Gunn	वीरेन्द्र कुमार गुप्ता		
28	151/04	Karan Anshul	करन अंशुल	Anil Kumar Gupta	अनिल कुमार गुप्ता		
29	199/04	Piyush Dahiya	पीयूष दहिया	C.H. Dahiya	सी एच दहिया		
30	202/04	Pallavi Singh	पल्लवी सिंह	Suresh Kumar Jain	सुरेश कुमार जैन		
31	340/04	Kasturi Yangki	कस्तूरी यांग्की	Dawala	दावला		
32	JK1025	Vikas Malik	विकास मलिक	Sabir Singh	साबिर सिंह	3rd	IIIrd
33	2K10in	Sandeep Sahu	संदीप साहू	Mahender Pratap Sahu	महेन्द्र प्रताप साहू	2nd	IInd

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B. Tech. Electrical Engineering

Sr.No	Roll_No	Name	Hindi Name	Father's Name	Hindi F_Name	div. d
1	99/04	Priyanka Jhinjha		Virender Kumar Jhinjha		
2	178/04	Akshu Singh		Mehar Singh		
3	188/04	Anurup Singh		Manphool Singh		
4	189/04	Pranav Kumar Pandey		Janardan Prasad Pandey		
5	190/04	Jahnavi Priya		Shashi Bhushan Prasad Verma		
6	191/04	Sandeep Dansal		Ram Avtar		
7	193/04	Komal Singla		D. K. Singla		
8	194/04	Bhanu Pratap		Ram Swaroop		
9	197/04	Rahul Kumar Singh		Bhagwabi Singh		
10	201/04	Rahul Bachpuriya		Naval Kishor Bachpuriya		
11	202/04	Smruthi		Suresh Chand		
12	203/04	Shweta Rastogi		Manjul Rastogi		
13	204/04	Sonam Jain		S. K. Jain		
14	205/04	Jyoti Narang		Bhaskar Narang		
15	209/04	Vanshidhar Panikam		Narayan Das		
16	210/04	Anumika Harikumath Tiwari		Harikamath Tiwari		
17	212/04	Ambika		Ashok Kumar		
18	213/04	Atanish Mittal		Radhey Shyam Mittal		
19	214/04	Shilpa Gupta		Suresh Kumar Gupta		
20	215/04	A. Soumya		Shekhar Gatti		
21	217/04	Umesh Kumar Deshmukh		Tirath Lal Deshmukh		
22	219/04	Harmeet Singh		Partap Singh		
23	220/04	Amandeep Singh		Malkit Singh		
24	222/04	Ramiko Chhabra		A. K. Chhabra		
25	224/04	Sonal R. Singh		Raviaku Singh Chaudhary		
26	225/04	Fajit Mithal		R. K. Mithal		
27	226/04	Aravind Kumar		Ram Parnesh Tiwary		
28	227/04	Gaurav Kumar		Sunder Lal Sagar		
29	229/04	Rahul Gulati		Harish Gulati		
30	230/04	Richa Gupta		Kishan Kumar Gupta		
31	232/04	Panma Khatri		Kailash Khatri		
32	233/04	Surbhi		Ashwani Kumar Mittal		
33	234/04	Deepali Jain		Ramesh Jain		

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Sr_N	Roll_No	Name	Hindi Name	Father's Name	Hindi F_Name	div.	d
34	235/04	Vibhu Kumar Mangla	विभु कुमार मंगल	Vijay Kumar Mangla	विजय कुमार मंगल		
35	236/04	Sajal Jain	सजल जैन	S. K. Jain	एस के जैन		
36	241/04	Vikas Prasoon	विकास प्रसून	Devendra Prasad Singh	देवेन्द्र प्रसाद सिंह		
37	243/04	Sushil Kumar Tarwal	सुशील कुमार तरवल	Ram Gopal Tarwal	राम गोपाल तरवल		
38	244/04	Kumar Purushottom Gautw	कुमार पुरुषोत्तम गौतम	Achanand Sharma	अचानन्द शर्मा		
39	246/04	Sumit Kumar Jena	सुमित कुमार जेना	Niranjan Jena	निरंजन जेना		
40	247/04	Nitin Singh Rautela	नितिन सिंह रौतेला	Ishwar Singh Rautela	ईश्वर सिंह रौतेला		
41	249/04	Neeraj Kumar	नीरज कुमार	Gopal Prasad Chaowhary	गोपाल प्रसाद चौधरी		
42	251/04	Amit Kumar Pausin	अमित कुमार पौसिन	Shankar Singh Prasin	शंकर सिंह पौसिन		
43	253/04	Shreya Atray	श्रेया अत्रे	Naresh Atray	नरेश अत्रे		
44	256/04	Jha Kalpit Piyush	झा कल्पित पीयूष	Pratah N. Jha	प्रातः एन झा		
45	260/04	Alok Aich	आलोक ऐछ	Arun Chandra Aich	अरुण चन्द्रा ऐछ		
46	261/04	Amitha Choudhary	अमिता चौधरी	B. S. Choudhary	बी एस चौधरी		
47	262/04	Venkata Narsi Reddy G	वेंकटा नरसी रेड्डी जी	Venkateswara Reddy G	वेंकटेश्वरा रेड्डी जी		
48	264/04	Vaibhav Goel	वैभव गोयल	Yadhuni Goel	यदुनि गोयल		
49	266/04	Ajay Gupta	अजय गुप्ता	Lajpat Rai Gupta	लाजपत राय गुप्ता		
50	273/04	Varun Bansal	वरुण बंसल	Arun Bansal	अरुण बंसल		
51	275/04	Karan Aggarwal	करण अग्रवाल	Pawan Kumar	पवन कुमार		
52	281/04	Rahul Rathor	राहुल राठौर	Raj Singh Rathor	राज सिंह राठौर		
53	294/04	Avdhesh Shukla	अवधेश शुक्ला	D. K. Shukla	डी के शुक्ला		
54	299/04	Yash Yadav	यश यादव	B. S. Yadav	बी एस यादव		
55	313/04	Nitika Kundra	नितिका कुंद्रा	Vinod Kundra	विनोद कुंद्रा		
56	114/04	Rajat Bansal	रजत बंसल	Anil Goma	अनिल गुप्ता		
57	116/04	M. Karthik	एम कार्थिक	M. Mohan	एम मोहन		
58	139/04	Amita	अमिता	Ram Kishort	राम किशोर		
59	139/04	Prerna Deorai	प्रेरणा देवराई	Laks Dorji	लक्ष दोरजी		
60	95/03	Vinay Kumar Yadav	विनय कुमार यादव	R. S. Yadav	आर एस यादव		
61	103/03	Praveen Joseph	प्रवीण जोसफ	V. J. Joseph	वी जे जोसफ		
62	207/03	Sandeep Kumar	संदीप कुमार	Ris Kumar	रिस कुमार		
63	223/03	Yogesh Roshan Kumar	योगेश रोशन कुमार	Roshan Lal Kumar	रोशन लाल कुमार		
64	2K22/03	Navneet Kumar	नवनीत कुमार	Suraj Bhan	सूरज भान	1st	द्वि
65	2K23/03	Neshan Kumar Gautam	नेशान कुमार गौतम	Shyam Bihari Gautam	श्याम बिहारी गौतम	1st	प्र

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B. Tech. Electronics & Communication Engineering

Sr. No	Roll_No	Name	Hindi Name	Father's Name	Hindi_F_Name	Div Div
1	06/04	Saurabh Khare		Gulshan Khare		
2	16/04	Saurabh Garg		S.K. Garg		
3	21/04	Monika Yadav		R.S. Yadav		
4	22/04	Namrash Garg		D.K. Garg		
5	10/04	Sahil Sabhlok		Yogesh Sabhlok		
6	14/04	Kiran Rawal		H.D. Rawal		
7	13/04	Karan Chauhan		Neelam Kumar Chauhan		
8	28/04	Priya Goel		L.N. Goel		
9	30/04	Charu Shankar		Mahabir Prasad		
10	40/04	G. Gayenath Reddy		G. Satyanarayana Reddy		
11	41/04	Ankit Jain		Yash Pal Jain		
12	42/04	Nishant Singhal		Rakesh Kumar Singhal		
13	45/04	Yugioop Narora		Deep Chand Narora		
14	46/04	Ruchika Puri		S.K. Puri		
15	45/04	Poonam Sharma		Om Prakash Sharma		
16	46/04	Yogeshwar Nath		Ram Naresh		
17	47/04	Hitesh Kumar		Shyam Lal		
18	48/04	Mukul Aggarwal		Suraj Bhan Aggarwal		
19	50/04	Newton		Gangadhar Singh		
20	51/04	Prince Kumar Goyal		Karoti Mal Goyal		
21	52/04	Manish Kambdar		Basaweraju K.C.		
22	53/04	Abhishek Srivastava		Narendra Prasad Srivastava		
23	56/04	Shashank Verma		Ajay Kumar Verma		
24	57/04	Kamlesh Samaddar		Kashi Nath Samaddar		
25	58/04	Anshul Vyas		Badri Lal Vyas		
26	59/04	Hiren Khanna		Shiv Rattan Khanna		
27	61/04	Ram Chhabra		Anil Chhabra		
28	62/04	Lalit K Barewal		Kheta Ram Barewal		
29	63/04	Hopen Kumar		Suresh Kumar		
30	64/04	Kumar Anubhav		H.C. Das		
31	65/04	Sachin Agarwal		Sunil Kumar Agarwal		
32	66/04	Akhil George Mathew		Mathew David Elamthckal		
33	67/04	Harish Subramanian		H. Subramanian		
34	68/04	Hasanbir Pratap Singh		Chhatrasinh Singh		
35	71/04	P. Arun Balan		P. Varkumari		
36	72/04	Rajan Sehgal		Inderjit Sehgal		

Sr_No	Roll_No	Name	Hindi Name	Father's Name	Hindi_F_Name	Div Div
37	73/04	Tarot Bharti		Hari Kishan		
38	74/04	Vivek Sharma		Vednam Sharma		
39	75/04	Vivek Ram		Ram Saru		
40	77/04	Megha Gupta		Sanjay Gupta		
41	78/04	Lalitha Naga Manohar P		Venkatappaah Patou		
42	80/04	Richa Khera		Ashok Kumar Karamchand Khera		
43	82/04	Idnish Singh Kochar		Satter Singh Kochar		
44	83/04	Vikas Dhankhar		Rajbir Singh Dhankhar		
45	84/04	Anjul Agarwal		Hansraj Agarwal		
46	85/04	Pawan Kumar Daheya		Jaipal Singh		
47	86/04	Shekhar Harigovind		P. Harigovertan		
48	87/04	Naveen Kumar		Dharamber		
49	88/04	Kaam Raju Samuk		Veerabhadra Rao		
50	89/04	Anshul Agrawal		R. K. Agrawal		
51	91/04	Malai Maheshwari		V. K. Maheshwari		
52	92/04	Arun Rawat		Amar Singh B.Rawat		
53	94/04	Mrinal Dongre		Kamlakar Laxman Dongre		
54	95/04	Nidhi Arora		Dharm Bhushan		
55	125/04	Pravesh Kumar Nagra		Bhag Ram Nagra		
56	134/04	S. Manoj		R. Sreenivasan		
57	152/04	Ujjawal Mishra		S. C. Mishra		
58	158/04	Pradeep Kumar Verma		Dropat Singh		
59	163/04	Abhishek Goel		Dharm Bhushan		
60	169/04	Pripinder Singh Chauhan		Sompal Chauhan		
61	170/04	Rahul Kala		Govind Prasad Kala		
62	181/04	Arun R		Rameshandran M.		
63	181/04	Rajat Brar		Haresh Kumar Brar		
64	208/04	Shilpa Gupta		Harekam Gupta		
65	223/04	Chaynita Tanau		A. K. Tanau		
66	249/04	Rinku Chauhan		Satya Pal		
67	254/04	Deepak		Madan Lal Mehra		
68	313/04	Prashant Pal		Braj Nandan Prasad Pal		
69	314/04	Dheeraj Kumar Shah		Jagdish Prasad Shah		
70	39/05	Piyush Bhagwatkar		Khemchand Bhagwatkar		
71	42/05	Indramani Prasad		Thagra Mahto		
72	56/05	Rajesh Kumar		Shyam Sunder Prasad		
73	83/05	Sunil Arumanalwato		A. Srinivas		

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Sr. No	Roll_No	Name	Hindi Name	Father's Name	Hindi_F_Name	Div	Div
74	8983	Indra Chander Verma	इंद्र चन्द्र वर्मा	T. Kameswara Rao	टि. कमेश्वर राव		
75	1H603	Pranav O. Shambhakar	प्रणव ओ. शम्भाकर	G.S. Shambhakar	जी. एस. शम्भाकर		
76	2468/03	Prashant Kumar Singh	प्रशांत कुमार सिंह	Shyam Dubon	श्याम दुबे		
77	2K2065	Vinay	विनय	Kunwar Singh	कंवर सिंह	1st	द्वितीय
78	2K2328	Praveen Kumar	प्रवीण कुमार	D. N. Prasad	डि. एन. प्रसाद		
79	2K1031	Mayur Shankar Rao Raut	मयूर शंकर राव राउत	Shankar Rao Sambhaji Rao	शंकर राव सम्भाजी राव	1st	प्रथम
80	J2K408	Vishal Phonsa	विशाल फोंसा	H.R. Phonsa	एच.आर. फोंसा	1st	द्वितीय

B. Tech. Mechanical Engineering

Sr. No	Roll_No	Name	Hindi Name	Father's Name	Hindi F_Name	div	di
1	100/04	Vivek Singhal	विवेक सिंघल	Raj Kumar Singhal	राज कुमार सिंघल		
2	101/04	Vaibhav Gandhi	वैभव गांधी	R. K. Gandhi	आर.के. गांधी		
3	102/04	Pranm Kumar Talukdar	प्रणीत कुमार तालुकदार	Pulin Kumar Talukdar	पुलिन कुमार तालुकदार		
4	103/04	Prem Singh	प्रेम सिंह	Ram Singh	राम सिंह		
5	105/04	Ratesh Kumar	रितेश कुमार	Sunder Dass	सुन्दर दास		
6	106/04	Deepak Nandal	दीपक नांदल	Ram Kumar	राम कुमार		
7	107/04	Subhash Chand Meena	सुभाष चन्द मीना	Leela Ram	लीला राम		
8	109/04	Sayush M Singh	सायुष एम सिंह	Rajeev M Singh	राजीव एम सिंह		
9	112/04	Prateek Kumar Mishra	प्रतीक कुमार मिश्रा	Nimun Charan Mishra	निमुन चरन मिश्रा		
10	113/04	Ajay Sharma	अजय शर्मा	Ram Saigh	राम सिंह		
11	117/04	Sandeep Chandra	सुदीप चन्द्र	M. S. Chandra	एम एस चन्द्र		
12	121/04	Yogesh Khanna	योगेश खन्ना	Prem Chand Khanna	प्रेम चन्द खन्ना		
13	123/04	Harsh Pahal	हर्ष पहल	Jagga Singh Pahal	जगगा सिंह पहल		
14	125/04	Ravi Ranjan Choudhary	रवि रंजन चौधरी	Ram Pyare Choudhary	राम प्यारे चौधरी		
15	126/04	Danny Singla	डैनी सिंगला	Sita Ram Sangla	सीता राम सिंगला		
16	127/04	Vijay Prakash Pande	विजय प्रकाश पंडित	Nand Kumar Pandit	नन्द कुमार पंडित		
17	128/04	Ashim Mittal	अशीम मित्तल	S.C. Mittal	एस.सी. मित्तल		
18	130/04	Ashish Dahiya	आशीष दहिया	Narender Pal Dahiya	नरेन्द्र पाल दहिया		
19	131/04	Amit Raizada	अमित रैजादा	Anand Mohan Raizada	आनन्द मोहन रैजादा		
20	133/04	Sourabh Shumali	सौरभ श्रीमाली	Bholeshwar Shrimali	भोलेश्वर श्रीमाली		
21	135/04	Dhruv	ध्रुव	Dilmp Kumar	दिलीप कुमार		
22	138/04	Gandhi Bhavik Bharat	गांधी भाविक भरत	Bharat	भरत		
23	141/04	Dinesh Kumar	दिनेश कुमार	Dhanpat Ram	धनपत राम		
24	142/04	Amit Khatri	अमित खत्री	Shri Krishan Khatri	श्रीकृष्ण खत्री		
25	143/04	Manish Kumar	मनीष कुमार	Krishna Kumar Choudhary	कृष्ण कुमार चौधरी		
26	144/04	Vikas Godiwal	विकास गोडिवाल	Ramesh Chand	रमेश चन्द		
27	145/04	D Sharat Chandra	डी. शरत चन्द्र	D. Surender	डी. सुरेन्द्र		
28	146/04	Pervez Moemiddin Ahmed	परवेज मोइनुद्दीन अहमद	H. Kabir Ahmed	एच. कबीर अहमद		
29	147/04	Rajat Luthra	रजत लुथरा	Krishan Lal Luthra	कृष्ण लाल लुथरा		
30	148/04	Gaurav Bhatta	गौरव भट्टा	Ashwora Bhatta	अश्वनी भट्टा		
31	149/04	Vicnj Singh	विजय सिंह	Jagadish Singh	जगदीश सिंह		
32	150/04	Sourabh Goel	सौरभ गोयल	Om Parkash	ओम प्रकाश		
33	151/04	Sushant Goyal	सुशांत गोयल	Shyam Sunder Agrawal	श्याम सुन्दर अग्रवाल		
34	154/04	Vivek Sharma	विवेक शर्मा	Kuldip Sharma	कुलदीप शर्मा		
35	155/04	Raghunath Sai Karrogauta	रघुनाथ साई कररगौटा	172 Chandrasekhar Rao K.	चन्द्रशेखर राव के०		

Sr. No	Roll_No	Name	Hindi Name	Father's Name	Hindi F_Name	div	div
36	136/04	Pasalapudi Gokul Varma		P. V. Suryanarayana Raju			
37	137/04	Mohit Bajaj		S. K. Bajaj			
38	159/04	Rahul Bakshi		Anil Kr. Bakshi			
39	160/04	Saray Vikul Vilas		Vilas Sadashiorao Seday			
40	161/04	Laxmi Narayan		Mahender Kumar Goel			
41	162/04	Kulbir Singh		R. K. Dhindhwal			
42	166/04	Ravinder Pal		Ram Pal			
43	167/04	Sagar Saigal		Ravish Saigal			
44	171/04	Abhay Kumar		Baijnath			
45	172/04	Prunck Ghosh		Sukhsadan Ghosh			
46	173/04	Sunil Kumar Meena		Bhagwot Prasad			
47	174/04	V. Bhanu Kumar Kaligotu		V. Satyanarayana Murty			
48	175/04	Ankur Jindal		Prem Jindal			
49	181/04	Sahil Bhardwaj		K. P. Sharma			
50	184/04	Anshul Saxena		L. N. Saxena			
51	186/04	Abhishek Srivastava		Nawal Kishore Srivastava			
52	187/04	Manihar Vikram		M. Kishan Ran			
53	192/04	Nitin Dhall		Chander Mohan Dhall			
54	200/04	Himanshu Dhanuka		Ashok Dhanika			
55	205/04	Nipun Goyal		Pawan Kumar			
56	211/04	Gourav Sharma		Madan Lal			
57	218/04	Keishnn Tumani		K. Imdu Meriei			
58	228/04	Pramhu Makani		Kewal Kishore Makani			
59	242/04	Amit Kumar		Ajit Singh			
60	245/04	Ankush Chatani		Ram Parkash Chatani			
61	254/04	Vipin Verma		O. P. Verma			
62	257/04	G. Z. Ram Harish		G Madhusudan Ran			
63	267/04	Rohit Bansal		Shashi Bansal			
64	282/04	Devender Kumar		Ram Bhal			
65	289/04	T. Karthik		T. Raja Gopalni			
66	291/04	Richa Verma		Rajeev Verma			
67	296/04	Gaurav Suri		Sabir Lal			
68	121/04	Jatin Kalra		Bhim Kumar Kalra			
69	2K111	Mukesh Ahluwat		Ram Kishan Ahluwat		2nd	हि
70	2K2163	Surya Prakash		Phool Singh Saini		2nd	हि

M.Tech. Civil Engg. (Transportation)

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2061/06	Rameshwar Dass Singhal	रामेश्वर दास सिंघल	Baru Mal Singhal	बारु मल सिंघल

M.Tech. Electrical Engg. (Control System)

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name	Division	Div
1	2201/06	Kurra Sivu Sankar	कुड़ा शिव शंकर	K. Nagendra	के नगेंद्र		
2	2203/06	Ranveer Singh	सशीर शिंग	Harnam Singh,	हरनाम सिंह		
3	2204/06	Ravi Verma	रवी वर्मी	Dinesh Chandra Verma	दिनेश चंद्र वर्मी		
4	2205/06	Minakshi Chinda	मिनाक्षी चिन्दा	Harbans Lal Chinda	हरबंस लाल चिन्दा		
5	2206/06	Mayankar Singh	मायंकर शिंग	Jawahar Lal Singh	जवाहर लाल सिंह		
6	2210/06	Sanjay Bhatnagar	संजय भटनागर	Subhash Chand	सुभाष चंद		
7	2K2745	Anil Kumar	अनिल कुमार	Mohan Lal	मोहन लाल	1st	प्रथम

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M.Tech. Electrical Engg. (Power System)

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2231/06	Amit Kumar Verma	अमित कुमार वर्मा	Ram Adhar Verma	राम अधार वर्मा
2	2232/06	Vijay Kumar Yedalla	विजय कुमार येडला	Somi Reddy	सोमी रेड्डी
3	2234/06	Papam Sharath Kumar	पापम शरत कुमार	P. Vedagiri	पी. वेदगिरी
4	2236/06	Rahul Srivastava	राहुल श्रीवास्तव	Vinod Kumar Srivastava	विनोद कुमार श्रीवास्तव
5	2240/06	Harish Kumar	हरीश कुमार	Om Parkash	ओम प्रकाश
6	2241/06	Jyan Parasher	ज्ञान पराशर	Jai Singh Sharma	जय सिंह शर्मा
7	766/05	Amit Sharma	अमित शर्मा	Ved Parkash Sharma	वेद प्रकाश शर्मा
8	759/05	Pradeep Kumar Pandey	प्रदीप कुमार पांडेय	Awadh Bihari Pandey	अवध बिहारी पांडेय

M.Tech. Electrical Engg. (PED)

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2264/06	Sayed Nabee Rasool	सैयद नबी रसूल	Khalubhasha	कालुभाषा
2	2265/06	A G Subramanyam	ए० जी० सुब्रमन्यम	A Gangatharam	ए० गंगाधरम्
3	2267/06	Vineet	विनीत	Devraj Singh	देवराज सिंह
4	2270/06	J. Prakash Rao	जे० प्रकाश राव	J. Ashok Rao	जे० अशोक राव

M.Tech. Electronics & Comm. Engg.

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2302/06	Shikhu Goel	शिखा गोयल	Suresh Kumar Goel	सुरेश कुमार गोयल
2	2303/06	Abhishek Kumar Tripathi	अभिषेक कुमार त्रिपाठी	Mahesh Prasad Tripathi	महेश प्रसाद त्रिपाठी
3	2305/06	Sanjay Kumar	संजय कुमार	Krishan Kumar	कृष्ण कुमार
4	2307/06	Pankaj Kumar	पंकज कुमार	Brijnandan Prasad	बृजनंदन प्रसाद
5	2309/06	Swati Agarwal	स्वाति अग्रवाल	Uma Charan Agarwal	उमा चरण अग्रवाल
6	2310/06	Anshu Mittal	अंशु मित्तल	Shiv Kumar Mittal	शिव कुमार मित्तल
7	2312/06	Santosh Kumar Bharti	संतोष कुमार भारती	Aniruddh Kumar	अनिरुद्ध कुमार
8	2313/06	Tejash Kumar Nageti	तेजश कुमार नागेटी	N. Balmowri	एन. बालमवरी
9	2314/06	Shailali Bansal	शैलाली बंसल	Shri Ram Bansal	श्री राम बंसल
10	2315/06	Paras Chawla	परस चावला	Gulshan Kumar Chawla	गुलशन कुमार चावला
11	2319/06	Parshant Aggarwal	प्रशांत अग्रवाल	S.H. Aggarwal	एस.एच. अग्रवाल
12	2320/06	Pradeep Kumar	प्रदीप कुमार	Pratap Singh	प्रताप सिंह

M.Tech. Instrumentation

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2501/06	Ch. Sivakameswara Rao	बी० शिवकामेश्वरा राव	Ch. Narasimhulu	सी० नरसिंहलु
2	2502/06	Yeswanth A.	यसवंत ए०	A. Venu	ए० विनु
3	2506/06	B. Koti Reddy	बी० कोटी रेड्डी	Linga Reddy	लिंगा रेड्डी
4	2507/06	Rajendra Singh	राजेन्द्र सिंह	Bhagat Singh	भगत सिंह
5	2508/06	Om Prakash Yadav	ओम प्रकाश यादव	Samar Bahadur Yadav	समर बहादुर यादव
6	2509/06	Uday Kiran Kas	उदय किरन कासी	K.N.V. Subba Rao	के० एन० वी० सुब्बा राव
7	2511/06	Samriti Pandey	स्मृति पाण्डेय	Ashwani Kumar Pandey	अश्वनी कुमार पाण्डेय
8	2512/06	Pushkar Joshi	पुष्कर जोशी	Vijaya Nand Joshi	विजया नन्द जोशी
9	2513/06	Lalit Rai	ललित राय	Ram Juttan Rai	राम जुतन राय
10	322/04	Raman Sharma	रमन शर्मा	Kamlesh Kumar Sharma	कमलेश कुमार शर्मा
11	323/04	Pradeep Kumar Singhal	प्रदीप कुमार सिंघल	Satyaprakash Singhal	सत्यप्रकाश सिंघल
12	414/03	Arvind Kumar Arya	अरविंद कुमार आर्य	Shyam Ji Prasad	श्यामजी प्रसाद
13	416/03	Ch. Lakshminartyuma Babu	सी० लक्ष्मीनारायण बाबु	Ch. Krishna Murthy	सी० कृष्णा मुर्ति
14	418/03	Virender Kumar	वीरेन्द्र कुमार	Gian Chand	ज्ञान चन्द

M.Tech. Nanotechnology

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2531/06	Philip Mathew	फिलिप मैथ्यू	K.V. Mathew	के. वि. मैथ्यू
2	2534/06	Vidhu Goyal	विधि गोयल	Ashok Kumar Goyal	अशोक कुमार गोयल
3	2535/06	Kusum Saini	कुसुम सैनी	Nate Singh	नाते सिंह
4	2536/06	Sumita Rani	सुमिता रानी	Sita Ram	सीता राम
5	2537/06	Sudhakar Pandey	सुधाकर पाण्डेय	Ayodhya Prashad Pandey	अयोध्या प्रसाद पाण्डेय
6	2538/06	Vinu Jain	विनिर जैन	Surender Kumar Jain	सुरेन्द्र कुमार जैन
7	2540/06	Karnvir Singh	कर्नवीर सिंह	Charanjit Singh	चरणजीत सिंह

M.Tech. Mechanical Engineering

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2401/06	Surya Prakash Mugudi	सूर्य प्रकाश मुगुदी	Narasimhulu	अरविंदगुप्त
2	2402/06	Alok Bhardwaj	आलोक भारद्वाज	Ram Niwas Sharma	राम निवास शर्मा
3	2403/06	Pardeep Gahlot	प्रदीप गहलोत	Balraj Gahlot	बलराज गहलोत
4	2405/06	Rajeev Rastogi	राजीव रस्तोगी	Sudhir Kumar Rastogi	सुधीर कुमार रस्तोगी
5	2407/06	Dhiraj Aggarwal	धीरज अग्रवाल	Ram Kumar Aggarwal	राम कुमार अग्रवाल
6	2408/06	Virender Singh	वीरेन्द्र सिंह	Balbir Singh	बलबीर सिंह
7	2409/06	Rupesh Gupta	रूपेश गुप्ता	Satpal Gupta	सतपाल गुप्ता
8	2410/06	K. Anil Kumar	के0 अनिल कुमार	K.K. Nair	के0 के0 नायर

M.Tech. Mechanical Engg. (CAD/CAM)

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi F_Name
1	2431/06	Rajeev Nagpal	राजीव नागपाल	Janak Raj	जनक राज
2	2432/06	Amit Dixit	अमित दीक्षित	S.S. Dixit	एस एस दीक्षित
3	2433/06	Arbind Raina	अरविन्द रैना	Bushan Lal Raina	भूषण लाल रैना
4	2434/06	Priyanka Chaturvedi	प्रियंका चतुर्वेदी	Ashok Chaturvedi	अशोक चतुर्वेदी
5	2435/06	V. Sai Karan	वी. साई किरन	V. Venkata Subba Raju	वी. वेंकटा सुब्बा राजु
6	2436/06	Chaudhary Vivek H. Prakash	चौधरी विवेक एच प्रकाश	Harham Prakash	विक्रम प्रकाश
7	2438/06	Harpal Singh	हरपाल सिंह	Shohan Singh	सोहन सिंह

M.Tech. Mechanical Engg. (Robotics)

Sr. No	Roll_no	Name	Hindiname	Father's Name	Hindi f_Name
1	2463/06	Bhaskar Chandra Kanchal	भास्कर चंद्र कंचलाल	Madan Chander Kandpal	मदन चंद कंठपाल
2	2464/06	Pradeep Kumar Bhankar	प्रदीप कुमार भाकर	Ram Chander Bhankar	राम चंद भाकर
3	2465/06	Amit Kumar	अमित कुमार	Tilak Raj	तिलक राज
4	2466/06	Aalu Goel	आलू गोल	J.K. Goel	जे०के० गोल
5	2467/06	Harjeet Singh	हरजीत सिंह	Harmesh Lal	हरमेश लाल
6	2468/06	Raj Kumar	राज कुमार	Shri Ram	श्री राम
7	2469/06	Amit Dagar	अमित डागर	G.S. Dagar	जी० एस० डागर
8	2471/06	Ashok Kumar	अशोक कुमार	Gugan Singh	गुगन सिंह
9	2472/06	Jyoti Nagil	ज्योति नागिल	Jai Parkash Nagil	जय प्रकाश नागिल
10	2473/06	Devender Kumar	देवेंद्र कुमार	Babu Ram	बाबू राम

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Master of Business Administration

Sr_No	Roll_No	Name	Hindi Name	Father's Name	Hindi P_Name
1	3002/06	Ajit Singh Dahiya	अजीत सिंह दहिया	Mahak Singh Dahiya	महक सिंह दहिया
2	3003/06	Himanshu Aneja	हिमांशु अनेजा	Dev Raj Aneja	देव राज अनेजा
3	3004/06	Uma Mittal	उमा मित्तल	B. B. Mittal	बी० बी० मित्तल
4	3005/06	Megha Sehgal	मेघा सहगल	Pardeep Sehgal	प्रदीप सहगल
5	3006/06	Gaurav Mukhija	गौरव मुखिजा	Om Parkash Mukhija	ओम प्रकाश मुखिजा
6	3007/06	Prithvi Pal Singh Chauhan	पृथ्वी पाल सिंह चौहान	H. S. Chauhan	एच० एस० चौहान
7	3008/06	Vishal Chopra	विशाल चोपड़ा	R. K. Chopra	आर० के० चोपड़ा
8	3009/06	Deepak Garg	दीपक गर्ग	Om Prakash Garg	ओम प्रकाश गर्ग
9	3010/06	Amit Gupta	अमित गुप्ता	Brij Bhushan Gupta	ब्रज भूषण गुप्ता
10	3011/06	Shubham Sarkar	शुभम सरकार	S. K. Sarkar	एस० के० सरकार
11	3012/06	Mohit Sharma	मोहित शर्मा	Ashwani Kumar Sharma	अश्वनी कुमार शर्मा
12	3013/06	Pind Sharma	पिंड शर्मा	Ashok Kumar	अशोक कुमार
13	3014/06	Sakshi Bansal	साक्षी बंसल	Ramesh Bansal	रमेश बंसल
14	3015/06	Ashok Sharma	अशोक शर्मा	Yashpal Sharma	यशपाल शर्मा
15	3016/06	Devender Singh	देवेन्द्र सिंह	Alhad Singh	अल्हड़ सिंह
16	3017/06	Gagan Bector	गगन बेक्टर	P C Bector	पी० सी० बेक्टर
17	3018/06	Chanderwesh	चंद्रवेश	Mohinder Singh	मोहिंद्र सिंह
18	3019/06	Sachet Malhotra	सचेत मल्होत्रा	Sunil Malhotra	सुनील मल्होत्रा
19	3021/06	Vivek Aggarwal	विवेक अग्रवाल	Tarsem Kumar Aggarwal	तरसेम कुमार अग्रवाल
20	3022/06	Amreen Singla	अमरीन सिंगला	Vijay Kumar Gupta	विजय कुमार गुप्ता
21	3023/06	Nallu Mittal	नल्लू मित्तल	Anil Mittal	अनिल मित्तल
22	3025/06	Amrata Kathane	अमृता कठाने	Totaram Kathane	टोटाराम कठाने
23	3027/06	Sonu	सोनू	Jarnail Singh	जरनैल सिंह
24	3028/06	Krishan Kumar	कृष्ण कुमार	Prem Nath Lamba	प्रेम नाथ लाम्बा
25	3029/06	Pardeep Kumar	प्रदीप कुमार	Raj Kumar	राज कुमार
26	3030/06	Nitin Nandan	नितिन नंदन	Devki Nandan	देवकी नंदन
27	3031/06	Nikhil Sharma	निखिल शर्मा	Megh Raj Sharma	मेघ राज शर्मा
28	3032/06	Yogesh Thakkar	योगेश ठक्कर	Harish Chander Thakkar	हरीश चन्द्र ठक्कर
29	3033/06	Ashmit Sainat	अश्मित सैनत	Bhuem Charan Sainat	भूम चरन सैनत
30	3034/06	Bhawna Grover	भावना ग्रोवर	Subhash Chander Grover	सुभाष चन्द्र ग्रोवर
31	3035/06	Sheenal Gupta	शीनल गुप्ता	Krishan Gopal Gupta	कृष्ण गोपाल गुप्ता
32	3036/06	Rakesh Gupta	राकेश गुप्ता	Vishpal Gupta	विशपाल गुप्ता
33	3037/06	Amit Kumar Dahiya	अमित कुमार दहिया	Phool Kanwar Dahiya	फूल कंवर दहिया

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Sr_No	Roll_No	Name	Hindi Name	Father's Name	Hindi F_Name
34	3038/06	Richa Lal	ऋचा लाल	Manohar Lal	मनोहर लाल
35	3039/06	Kangana Malik	कंगना मलिक	Ashwani Kumar Malik	अश्वनी कुमार मलिक
36	3040/06	Devika Lamba	देविका लम्बा	H. K. Lamba	एच के० लम्बा
37	3041/06	Ankur Jain	अंकुर जैन	Anil Kumar Jain	अनिल कुमार जैन
38	3042/06	Neha Thapliyal	नेहा थपलियाल	Harish Chander Thapliyal	हरिश चन्द्र थपलियाल
39	3043/06	Niti Kohli	नीति कोहली	Anil Kumar Kohli	अनिल कुमार कोहली
40	3044/06	Sumit Watson	सुमित वाटसन	Balwant Singh	बलवंत सिंह
41	3045/06	Apeksha Hooda	अपेक्षा हुड्डा	R. S. Hooda	आर एस हुड्डा
42	3046/06	Gaurav Kumar	गौरव कुमार	Kaushal Kishore Gupta	कौशल किशोर गुप्त
43	3047/06	Rajat Sharma	रजत शर्मा	Ravinder Sharma	रविंद्र शर्मा
44	3048/06	Prakash Kumar Prabhakar	प्रकाश कुमार प्रभाकर	Sahdal Brim	सहदल ब्रिम
45	3049/06	Sandeep Kumar	संदीप कुमार	Balwant Singh	बलवंत सिंह
46	3050/06	Deepak Rangrraya	दीपक रंगरेज	Lahri Singh	लहरी सिंह
47	3051/06	Nadeem Hassan	नदीम हसन	G H Hassan Gassi	जी एच हसन गस्सी
48	3052/06	Varun Soi	वरुण सोई	Jatinder Pal Soi	जतिंद्र पाल सोई
49	3053/06	Ashutosh	आशुतोष	Ganga Dutt Shastri	गंगा दत्त शास्त्री
50	3054/06	Kuldeep Panwar	कुलदीप पंवार	B. L. Panwar	बी एल पंवार
51	3055/06	Shivani Rana	शिवानी राना	Dharm Pal Rana	धर्मपाल राना
52	3056/06	Parveen	परवीन	Jai Parkash	जय प्रकाश
53	3057/06	Amish Chaudhary	अमीष चौधरी	Amar Nath	अमर नाथ
54	3058/06	Gaurav Narriya	गौरव नरिया	Mohar Chand	मोहर चंद
55	3059/06	Sanjay Kumar	संजय कुमार	Ram Kishan	राम किशन
56	3060/06	Ravinder Kaswar	रविंद्र कुमार	Gaje Singh	गजे सिंह
57	3061/06	Dipankar Pal	दिपंकर पाल	Dinesh Kumar Pal	दिनेश कुमार पाल
58	3062/06	Amit Singh Chauhan	अमित सिंह चौहान	Arjun Singh	अर्जुन सिंह
59	3063/06	Jasvinder Singh	जसविंद्र सिंह	Sarjit Singh	सरजीत सिंह

Doctor of Philosophy

Sr. No.	Registration No.	Name	Hindi Name	Father's Name	Hindi F_Name	Deptt.
1	2K-04-NITK-Ph.D-1036	Rajesh Kumar	राजेश कुमार	Niranjan Singh	निरंजन सिंह	Mathematics
2	2K-04-NITK-Ph.D-1025	Vijay Mittal	विजय मित्तल	Prem Chand	प्रेम चन्द	Mechanical Eng
3	2K-04-NITK-Ph.D-1027	Parveen Kumar Saini	परवीन कुमार सैनी	Pritam Singh	प्रीतम सिंह	Mechanical Eng
4	2K-04-NITK-Ph.D-1028	Suresh Dhaman	सुरेश धीमान	S.L. Dhaman	एस एल धीमान	Mechanical Eng
5	2K-04-NITK-Ph.D-1019	Amun Aggarwal	अमन अग्रवाल	M.C. Aggarwal	एम सी अग्रवाल	Mechanical Eng
6	2K-05-NITK-Ph.D-1049	Vijay Kumar Bansal	विजय कुमार बंसल	Chand Singh Bansal	चन्द सिंह बंसल	Civil Engg.
7	2K-04-NITK-Ph.D-1047	Gupta Sanjeev Kumar Varinder	गुप्ता संजीव कुमार वरिंदर	Varinder Gupta	वरिंदर गुप्ता	Civil Engg.
8	2K-04-NITK-Ph.D-1013	Ramesh Kumar	रमेश कुमार	Hari Singh	हरि सिंह	Chemistry
9	2K-04-NITK-Ph.D-1010	Rajesh Kumar	राजेश कुमार	Raghbir Singh	राघबीर सिंह	Physics
10	2K-04-NITK-Ph.D-1003	Prabhavathi Tanaja	प्रभावती तनाजा	Vijay Sarathi Tanaja	विजय सारथी तनाजा	Physics
11	2K-05-NITK-Ph.D-1050	Anup Kumar	अनुप कुमार	Ramesh Chander	रमेश चन्द	Physics

Item 12.8: To consider award of one medal in the memory of Dr. R.P Singh to the Topper of Final Year of Mechanical Engg. Branch instead of two medals (For toppers of second and third year Mechanical Engineering)

The wife of Late Dr. R.P Singh requested for introduction of two Silver medals in fond memory of her husband in the year 1995. Since then, two medals have been given to the toppers of second and third year of Mechanical Engg. Branch. Now vide letter dated 2.1.2009, (copy of the letter is enclosed as Appendix 12.8 on page 188) she has requested to reduce the number to one which is proposed to be awarded to the topper of Final Year of Mechanical Engg. Branch.

The Senate may kindly approve.

To

The Dean Academic
N.I.T.
Kurukshetra

May be taken up in the Senate meeting
2/1/09

D.R (Acad)

Sub: Introduction of a medal in the memory of Late Dr. R.P.Singh.

Sir,

    I had proposed for the Introduction of Silver medal for the topper students of second year and third year of Mechanical Branch in memory of my late husband. I have come to know from the concerned authorities that the amount of the interest earned from the sum deposited for the purpose is not sufficient for two medals. So, I propose that instead of two medals (for second year and third year topper students) one medal may be instituted for the topper of final year of Mechanical Branch.

    I shall feel thankful.

Date 02.01.2009

                Yours faithfully

                Saroj 02.01.09
              W/o LateDr.R.P.Singh
                Warden G.H.

Item 12.9   To consider approval for the students to be awarded Medals and Certificates in the 6th Convocation scheduled to be held on 28th January, 2009

The following Medals and Academic Prizes are to be awarded to the students of B. Tech:

Sr. No	Particulars	Number
1.	Branch wise Toppers	05
2.	Best All- Rounder	01
3.	Sh. Shyam Sunder Dhingra Medal (overall topper of the batch)	01
4.	Major Project Toppers	08
5.	Dr. R.P. Singh Medal (topper of final year of Mechanical branch)	01
6.	OPJEM Scholarship	04
7.	Academic Prizes	36

The lists showing names of the respective medal and prize winners are placed as Appendix 12.9 from page 190 to 194

The Senate may consider and approve the award of above medals and prizes.

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

No. Exam./08/

Dated: 26.12.2008

LIST OF BRANCH-WISE TOPPERS OF 2K4 BATCH

Discipline	Name	Roll No.	CGPA
Computer Engg.	Rohit Bhat	08/04	9.7919
Electronics & Comm. Engg.	Anshul Agarwal	80/04	9.7161
Mechanical Engg.	Robin Bansal	267/04	9.8475
Electrical Engg.	Shilpa Gupta	214/04	9.7375
Civil Engg.	Anshul Bansal	271/04	9.8498

LIST OF TOPPERS IN MAJOR PROJECT OF 2K4 BATCH

Discipline	Name	Roll No.	Marks out of 100
Computer Engg.	i) Rohit Bhat ii) Kumar Anshul	08/04 153/04	92 92
Electronics & Comm. Engg.	i) Monika Yadav ii) Kiran Rawal iii) Chaynika Taneja	21/04 34/04 223/04	97 97 97
Mechanical Engg.	Rajat Luthra	147/04	92
Electrical Engg.	Nitin Singh Rautela	247/04	96
Civil Engg.	Nikhil Gupta	319/04	93

OVERALL TOPPER OF 2K4 BATCH

Discipline	Name	Roll No.	Marks out of 100
Civil Engg.	Anshul Bansal	271/04	9.8498

Controller of Examinations

Deputy Registrar (Academic)

OFFICE OF PROCTOR
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA - 136119

Dr. K.S. Sandhu
Proctor & Professor
Department of Electrical Engineering

No. BR/2007-08
Date 5-1-2009

Ms Jyoti Nartang, Roll no. 306804 has been selected as Best All-Rounder for the Year 2007-08.

Dr. K.S. Sandhu
Proctor

Dean Academics

D. R. (Acad)

6/1/09

[9]

OPJEMS
nurturing future leaders

To,

The Director
National Institute Of Technology- Kurukshetra

Dear Sir/ Ma'am,

I am pleased to inform you that OP Jindal Engineering and Management Scholarships (OPJEMS) has now been successfully concluded. I would like to thank you for all the support that the institute and you have extended to make this endeavor a success.

The institute had provided us a list of the top twenty eligible students for each academic year for the OPJEMS process. Out of the 20 students, from each academic year, the following have been finally selected for the OPJEMS based on their online test scores and performance in the interview:

Year 1:
- Mr. SAMAVEDAM PRAMOD

Year 2:
- Mr. MOHIT GUPTA

Year 3:
- Ms. NEHA CHAUDHARY

Year 4:
- Ms. SHUBHANI GUPTA

With the wholehearted support/cooperation from all the institutes and also with the excellent administration and coordination provided by our knowledge partner Right Management Pvt. Ltd., the entire process was conducted smoothly at all the institutes.

On behalf of **OPJEMS and the OP Jindal Group of Companies**, I wish to express sincere thanks to you and all others of your institute for the kind cooperation, coordination and the excellent infrastructure support provided at the campus, without which it would not have been possible to conduct the test so smoothly. We request you to send us the **acknowledgement form** signed by the students (with the stamp of the institute) as early as possible.

I once again thank you for your whole hearted support for the OPJEMS process and look forward to a continued association with your institute.

With Warm Regards,

Dr. Sanjeev P. Sahni
Head-Strategic HR
Jindal Steel & Power Limited   192

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

Dated: 12.01.2009

No. Acad./2009/

NOTIFICATION

Sanction of the Director is hereby conveyed to the award of Institute Prize for getting highest marks in the Semester Examination as mentioned against each for the year 2007-2008. The students except those of B. Tech. 2004 Batch, will get the technical books to the extent of Rs. 250/- of their choice at the Convocation,2009.

Sr. No	Roll No.	Name of Students	Branch	Semester	Highest, SGPA & Marks
1.	107540	Ms. Kanika Madan	-	1st	9.9623
2.	107325	Suneet Angra	-	2nd	10.0000
3.	1108/06	Ms. Deepa	CO	3rd	9.9630
4.	1105/06	Ms. Diksha	IT	3rd	9.9623
5.	1616/06	Ms. Nishtha Jain	EC	3rd	9.5818
6.	1400/06	Hitesh Mehta	M	3rd	9.5962 (934)
7.	1512/06	Kapil Grover	IEM	3rd	9.9231
8.	1608/06	Ms. Neha Choudhary	E	3rd	9.8364
9.	1838/06	Ms. Shruti Kamara	C	3rd	9.8519
10.	1631/06	Ms. Gazal	CO	4th	9.9259
11.	1105/06	Ms. Diksha	IT	4th	9.8704
12.	1616/06	Ms. Nishtha Jain	EC	4th	9.6481
13.	1508/06	Saamir Gupta	M	4th	9.7091 (931)
14.	1512/06	Kapil Grover	IEM	4th	9.8868
15.	1608/06	Ms. Neha Choudhary	E	4th	9.3571
16.	1804/06	Prabudh Jain	C	4th	9.4645
17.	09/05	Abhigyan Mundhra	CO	5th	9.3103
18.	90/05	Ms. Shubhuni	EC	5th	10.0000 (850)
19.	353/05	Adit Aggarwal	M	5th	10.0000 (974)
20.	128/05	Ms. Nibedita Padhy	E	5th	9.7567 (889)
21.	177/05	Nishant Singla	C	5th	9.7000
22.	12/05	Sibasis Panda	CO	6th	9.8889 (667)
23.	44/05	Karan Goyal	EC	6th	10.0000
24.	353/05	Adit Aggarwal	M	6th	10.0000
25.	128/05	Ms. Nibedita Padhy	E	6th	10.0000
26.	335/05	Piyush Pruthi	C	6th	10.0000
27.	98/04	Kshitij Skukla	CO	7th	10.0000 (810)
28.	21/04	Ms. Monika Yadav	EC	7th	10.0000 (823)
29.	157/04	Mohit Bajaj	M	7th	10.0000 (671)
30.	232/04	Ms. Tanina Khatri	E	7th	10.0000 (914)
31.	293/04	Ms. Aenna Jagga	C	7th	10.0000 (849)
32.	08/04	Rohit Bhat	CO	8th	10.0000 (666)
33.	223/04	Ms. Chaynika Teneja	EC	8th	9.9200 (938)
34.	112/04	Prateek Kumar Mishra	M	8th	10.0000 (805)
35.	214/04	Ms. Shilpa Gupta	E	8th	10.0000 (985)
36.	271/04	Anshul Bansal	C	8th	10.0000 (1040)

MAJOR PROJECT

Sr. No	Roll No.	Name of Students	Branch	Highest Marks
1.	08/04	Rohit Bhat	Computer Engg.	92
2.	153/04	Kumar Anshul	-do-	92
3.	21/04	Ms. Monika Yadav	Electronics & Comm. Engg	97
4.	34/04	Kiran Rawal	-do-	97
5.	223/04	Chaynika Taneja	-do-	97
6.	147/04	Rajat Luthra	Mechanical Engg	92
7.	247/04	Nitin Singh Rautela	Electrical Engg.	90
8.	319/04	Nikhil Gupta	Civil Engg.	93

The students may give the title of one book each amounting to Rs. 250/- (Approx.) to the Academic Section by 16.01.2009 so that the same may be procured for them. This will be presented to them at the time of Convocation -2009

Deputy Registrar(Academic)

Copy to :
1. Assistant Registrar (Accounts) to please send prize money of Rs. 250/- each to the students of B.Tech. 2004 - Batch respectively at their home addresses as they have already passed out from the Institute.
2. Librarian for information and necessary action.
3. All Notice Board (Instt. Hostels)

Item 12.10: To consider the format of degree to be awarded to the MBA Students in the 6th Convocation of the Institute to be held on 28th January, 2009.

For the first time the degree of MBA will be awarded to the students of this course in the 6th Convocation which is scheduled to be held on 28th January, 2009. This course was started from the academic session 2006-07 under self-financing scheme. The format of the degree certificate for MBA is placed at Appendix 12.10 on page 196

The Senate may kindly consider and approve the format of degree to be awarded to the MBA students.

क्रम संख्या/Sr. No. _____   Sample   अनुक्रमांक /Roll No. _____

राष्ट्रीय प्रौद्योगिकी संस्थान
कुरुक्षेत्र

एतद्द्वारा _____ में

मास्टर ऑफ बिजनेस एडमिनिस्ट्रेशन

की उपाधि _____

पुत्र:/पुत्री श्री _____ को

पदान करता है, जिन्होंने पाठ्यक्रम का अध्ययन सफलतापूर्वक पूर्ण किया और निर्धारित परीक्षाएं उत्तीर्ण की है।

यह मुद्रित उपाधि _____ को प्रदत्त की गई।

National Institute of Technology
Kurukshetra

hereby confers the degree of

Master of Business Administration

in _____

on _____

son/daughter of Shri _____ who

has successfully completed the course of studies and passed the prescribed examinations.

Given this day, the _____ of _____ under the seal of the Institute.

Sample

196

कुल-सचिव
Registrar

निदेशक
Director

सटका निकायक मण्डल
Chairman

Item 12.11: To consider reconstitution of Standing Committee on Senate Affairs

The Senate in its 5th meeting held on 14th January, 2006 vide item No. 5.18 constituted "Standing Committee on Senate Affairs" to take emergent and time bound decisions on certain issues pertaining to academic affairs. The present composition of the SCSA is as under:-

i) All Deans

ii) Chairman/Chairmen of the concerned Department(s)

iii) Three Senior-most Professors of the Institute, not covered under (i) and (ii) above

Composition of the Senate has changed due to enforcement of NIT Act 2007 (composition of the senate as per the Act is enclosed as Appendix 12.11 on page 198). Consequent upon the same, the Senate may kindly consider reconstitution of Standing Committee on Senate Affairs and decide.

NATIONAL INSTITUTE OF TECHNOLOGY,
KURUKSHETRA-136119

No. NITK/Senate Comp./Vol.II/ -) / . T / .   Dated:

Subject: Composition of Senate under NIT Act 2007 enforced w.e.f. 15th August, 2007

This is to inform that as laid down under Section 14 and Statute 7of the National Institutes of Technology Act 2007, the following shall be the composition of Senate of this Institute -

14   (a)   The Director, ex officio, who shall be the Chairman of the Senate
      (b)   The Deputy Director, ex officio;
      (c)   The Professors appointed or recognized as such by the Institute for the purpose of imparting instructions in the Institute;
      (d)   Three persons, one of whom shall be a woman, not being employees of the Institute, to be nominated by the Chairperson in consultation with the Director, from amongst educationists of repute, one each from the field of science, engineering and humanities;

      (e)   Such other members of the staff as may be laid down in the statutes - namely

Heads of the departments and Centre/s of the institute:
The Librarian/ Professor I/C Library of the Institute:
Chief Warden or equivalent:
Training and Placement Officer.

Senate may co-opt members as and when found necessary. In addition Senate may invite two student representatives.

It is requested that Professor Incharge Academic and Senate affairs may please draw the panel of educationists of repute one each from the field of science, engineering and humanities for consideration of the Director (Chairman of the Senate) and subsequent approval of the Chairperson

REGISTRAR

Dr. B. Setia, Professor Incharge (Academic & Senate affairs

Copy to the Dean (Academic) for information

Item 12.12: To consider and approve the revised scheme of MBA Degree Programme

The Board of Studies of Business Administration Department in its meeting held on 27.04.2008 approved changes in the scheme of MBA effective from academic session 2008-2009. The minutes of the Board of Studies, old curriculum (2006-2008 & 2007-2009) and modified curriculum (2008-2010) alongwith the proposed changes in syllabi are enclosed as Appendix 12.12 from page 200 to 218.

The Senate may kindly consider and approve the same.

DEPARTMENT OF BUSINESS ADMINISTRATION
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

No. BA/ 869

Date: January 6, 2009

Kindly refer to letter No. BA/598 dated 30th April, 2008, regarding the Revised Curriculum and the Syllabi of the MBA Course.

May I remind you that this has not been approved by the Senate. It is, therefore, requested that this be included as an agenda item in the Senate meeting scheduled to be held on 19th January, 2009.

TP J PHILIP
CHAIRMAN

Dean/Prof. In-charge(Academic Affairs)

No. BA/BOS/ 373

Date: April 28th, 2008

Sub: Minutes of the 3rd meeting of the Board of Studies held on 27.04.2008 at 11:00 AM in the office of the Chairman, Department of Business Administration.

The 3rd meeting of the Board of Studies was held on 27.04.2008 at 11:00 AM in the office of the Chairman, Department of Business Administration. The following decisions were taken:

Item No. 3.1 To confirm the minutes of the 2nd meeting of the Board of Studies (BOS) of the Department of Business Administration, National Institute of Technology, Kurukshetra held on December 30, 2006

The minutes of the above meeting were confirmed.

Item No. 3.2 To approve the list of examiners for odd semester examinations held in November/December, 2007

The committee approved the list of examiners for odd semester examinations held in November/December, 2007 of Master of Business Administration.

Item No. 3.3 To approve the list of examiners for the even semester examinations to be held in May, 2008

The committee considered the list of examiners for even semester examinations to be held in May, 2008 of Master of Business Administration Course and approved the same.

Item No. 3.4 To consider and approve the curriculum and syllabi for the specialization 'International Business Management'

The committee considered the curriculum and syllabi for the specialization 'International Business Management' of Master of Business Administration Course and approved the item.

Item No. 3.5 To revise the Course No. MBA-108 and Course No. MBA-204 in the field of Information Technology Management

The committee considered the course No. MBA-108 – Computer Application in Management and Course No. MBA-204 – Management Information System and approved the item.

Item No. 3.6 To approve the revised curriculum for the MBA Course

The committee considered the revised curriculum of Master of Business Administration Course and approved the same.

The meeting ended with a vote of thanks to the Chair.

(R C BHATTACHARJEE)
CHAIRMAN

1. Dr. M K Jain
   Professor,
   Dept. of Business Administration (2 years Course)
   Kurukshetra University, Kurukshetra

2. Dr. P P Sengupta
   Professor,
   Dept. of Business Administration,
   NIT, Durgapur, W.B.

3. Dr. P J Philip
   Professor,
   Dept. of Business Administration,
   NIT, Kurukshetra

The following hon'ble members were invited as special invitees on the Board of Studies to have their expert opinion:

1. Maj. Gen. G. K. Nischol,
   Director General,
   All India Management Association,
   Management House, 14, Institutional Area,
   Lodhi Road,
   New Delhi – 110 003

2. Director,
   Management Development Institute,
   Gurgaon

Copy to:
The **Director**, National Institute of Technology, Kurukshetra for information please.

DEPARTMENT OF BUSINESS ADMINISTRATION
OLD CURRICULUM 2006-2008 & 2007-2009

SEMESTER-I

Course No.	Course Title	L	T	P	M	Credit
MBA-101	Principle & Practices of Management	3	1	0	100	3.5
MBA-102	Organization Behaviour	3	1	0	100	3.5
MBA-103	Managerial Economics	3	1	0	100	3.5
MBA-104	Management Accounting	3	1	0	100	3.5
MBA-105	Marketing Management	3	1	0	100	3.5
MBA-106	Business Communication	3	1	0	100	3.5
MBA-107	Business Statistics	2	1	0	100	2.5
MBA-108	Computing skills	1	2	0	100	2.0

Credits 25.5

SEMESTER-II

Course No.	Course Title	L	T	P	M	Credit
MBA-201	Financial Management	3	1	0	100	3.5
MBA-202	Human Resource Management	3	1	0	100	3.5
MBA-203	Production & Operations Management	3	1	0	100	3.5
MBA-204	Management Information System	3	1	0	100	3.5
MBA-205	Quality Management	3	1	0	100	3.5
MBA-206	Business Environment	3	1	0	100	3.5
MBA-207	Business Ethics	2	1	0	100	2.5
MBA-208	Business Application Software	0	0	4	100	2.0

Credits 25.5

SEMESTER-III

Course No.	Course Title	L	T	P	M	Credit
MBA-301	International Business	3	1	0	100	3.5
MBA-302	Business Law & Corporate Taxation	3	1	0	100	3.5
MBA-303	Entrepreneurship & Project Management	3	1	0	100	3.5
311/321/331/341	Maj. Specialization HRM (Any 3 electives)	3	1	0	100	3.5(each)
312/322/332/342	Maj. Specialization Financial Mgt. (Any 3 electives)	3	1	0	100	3.5(each)
313/323/333/343	Maj. Specialization Marketing Mgt. (Any 3 electives)	3	1	0	100	3.5(each)
314/324/334/344	Maj. Specialization IT Mgt. (Any 3 electives)	3	1	0	100	3.5(each)
315/325/335/345	Minor Specialization (Any 2 electives out of a Maj. Specialization other than one's own Maj. Spln.)	3	1	0	100	3.5(each)
MBA-308	SUMMER TRAINING (6-8 weeks)				200	4.0

Credits 32.0

SEMESTER-IV

Course No.	Course Title	L	T	P	M	Credit
MBA-401	Strategic Management	3	1	0	100	3.5
MBA-402	E-Commerce	3	1	0	100	3.5
MBA-403	Project	-	-	-	200	6.0
411/421/431/441	Maj. Specialization HRM (Any 3 electives)	3	1	0	100	3.5(each)
412/422/432/442	Maj. Specialization Financial Mgt. (Any 3 electives)	3	1	0	100	3.5(each)
413/423/433/443 /453	Maj. Specialization Marketing Mgt. (Any 3 electives)	3	1	0	100	3.5(each)
414/424/434/444	Maj. Specialization IT Mgt. (Any 3 electives)	3	1	0	100	3.5(each)
415/425/435/445	Minor Specialization (Any 2 electives out of a Maj. Specialization as chosen in 3rd Semester)	3	1	0	100	3.5(each)

Credits 30.5

MBA PROGRAM

MODIFIED CURRICULUM (2008-2010)

SEMESTER-I

Course No.	Course Title	L	T	P	T	Credit
MBA-101	Principle & Practices of Management	3	1	0	4	3.5
MBA-103	Organization Behaviour	3	1	0	4	3.5
MBA-105	Managerial Economics	3	1	0	4	3.5
MBA-107	Management Accounting	3	1	0	4	3.5
MBA-109	Marketing Management	3	1	0	4	3.5
MBA-111	Business Communication	3	1	0	4	3.5
MBA-113	Business Statistics	2	1	0	3	2.5
MBA-115	Computer Application in Management	2	0	2	3	3.0

Credits: 26.5

SEMESTER-II

Course No.	Course Title	L	T	P	T	Credit
MBA-102	Financial Management	3	1	0	4	3.5
MBA-104	Human Resource Management	3	1	0	4	3.5
MBA-106	Production & Operations Management	3	1	0	4	3.5
MBA-108	Management Information System	3	1	0	4	3.5
MBA-110	Quality Management	3	1	0	4	3.5
MBA-112	Business Environment	3	1	0	4	3.5
MBA-114	Business Ethics	2	1	0	3	2.5
MBA-116	Business Application Software	0	0	4	4	2.0

Credits: 25.5

SEMESTER-III

Course No.	Course Title	L	T	P	T	Credit
MBA-201	International Business	3	1	0	4	3.5
MBA-203	Business Law & Corporate Taxation	3	1	0	4	3.5
MBA-205	Entrepreneurship & Project Management	3	1	0	4	3.5
211/221/231/241	Maj. Specialization HRM (Any 3 electives)	3	1	0	4	3.5(each)
213/223/233/243	Maj. Specialization Financial Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
215/225/235/245	Maj. Specialization Marketing Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
217/227/237/247	Maj. Specialization IT Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
219/229/239/249	Maj. Specialization IB Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
	Minor Specialization (Any 2 electives out of a Maj. Specialization other than one's own Maj. Spln.)	3	1	0	4	3.5(each)
MBA-207	Summer Training				150	4.0

Credits: 32.0

SEMESTER-IV

Course No.	Course Title	L	T	P	T	Credit
MBA-202	Strategic Management	3	1	0	4	3.5
MBA-204	E-Commerce	3	1	0	4	3.5
MBA-206	Project	-	-	-	200	6.0
212/222/232/242	Maj. Specialization HRM (Any 3 electives)	3	1	0	4	3.5(each)
214/224/234/244	Maj. Specialization Financial Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
216/226/236/246	Maj. Specialization Marketing Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
218/228/238/248	Maj. Specialization IT Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
220/230/240/250	Maj. Specialization IB Mgt. (Any 3 electives)	3	1	0	4	3.5(each)
	Minor Specialization (Any 2 electives out of a Maj. Specialization as chosen in 3rd Semester)	3	1	0	4	3.5(each)

Credits: 30.5

Note: In 1st and 2nd Semester, candidates are required to take Core courses only. In 3rd and 4th Semesters apart from the Core subjects, each candidate is required to opt for a Major Specialization (3 electives) out of the 5 viz. (1) Human Resources Management, (2) Financial Management, (3) Marketing Management, (4) Information Technology Management and (5) International Business Management and a Minor Specialization (2 electives) from either of the remaining 4 Major Specializations. An elective course will be run if it is opted by at least 8 students.

MBA-219, (MBA-315, OLD)   FOREIGN TRADE PROCEDURES AND DOCUMENTATION (3.5 Credits, 3-1-0)

INTRODUCTION
Significance of procedures and documentation in international trade, procedures and documentation as trade barriers, ITC (HS) Classification system, Role of ICC.

STEPS FOR EXPORTING
Organizing, registration formalities, export licensing, basis of export marketing, selection of export products, identification of export markets, selection of prospective customers.

EXPORT CONTRACT & PROCESSING OF AN EXPORT ORDER
Elements of export contract, acknowledgement scrutiny & confirmation, reservation of shipping space, forward cover facilities, confirm export order.

EXPORT PAYMENT TERMS & DOCUMENTS
INCOTERMS, Documentary credit, Document on payment, Bill of Exchange, Open account, Shipping Bill, Bill of transshipment, Invoice, Mate's receipt, Bill of lading

FINANCING FOREIGN TRADE & QUALITY CONTROL
Pre-shipment finance, post-shipment finance, deferred payment terms, cargo (marine and air) insurance, quality standards for exports, quality appraisal, quality complaints

References:
1. Paras Ram, Export: What, Where & How, Anupam Publishers.
2. Nabhi's exporters Manual & Documentation.
3. Government of India Handbook of Import-Export Procedures.
4. Thomas E. Johnson, Export/Import Procedures and Documentation, AMACOM.
5. Frances, Cherundam, International Trade and Export Management, Himalaya Publishing

MBA-229, (MBA-325, OLD)   FOREIGN EXCHANGE MANAGEMENT
(3.5 Credits, 3-1-0)

INTRODUCTION TO FOREIGN EXCHANGE
Defining foreign exchange, types of foreign exchange market and transactions, participants in the foreign exchange markets.

FOREIGN EXCHANGE RATES
Defining foreign exchange rates, types of foreign exchange rates, determining the exchange rates, official and free market rates, cross currency rates, forward rates.

ORGANISATION OF THE FOREIGN EXCHANGE MARKET
Currency futures, currency options, currency swaps, factors affecting exchange rates, exchange rate arrangement in India, forecasting exchange rates.

RISK MANAGEMENT
Defining foreign exchange risk, exposure to currency, parameters and constraints on exposure management, strategies for exposure management, techniques to foreign exchange risk, hoarding and hedging.

CURRENT ISSUES
Overview of FERA and FEMA, LERMS, appreciation and depreciation of currencies in international market.

References:
1. C. Jeevanandam, Foreign Exchange Market and Risk Management, sultan Chand & Sons.
2. Aliber, R.Z., Exchange Risk and Corporate International Finance, London, Macmillian.
3. Luen Cornelius, Trading in Global Currency Markets, Prentice Hall.
4. Shapiro, Multinational Financial management, Prentice hall India.
5. Apte, P.G, International Financial management, Tata Mcgraw Hill.

MBA-239, (MBA-335, OLD)   INDIAN FOREIGN TRADE & POLICY
(3.5 Credits, 3-1-0)

INTRODUCTION
India's foreign trade in the global context, Structure and equilibrium of India's balance of Payments, Recents trends in India's foreign trade.

DIRECTIONAL PATTERN
Major export commodities, thrust area commodities- their trend, problems and prospectus, major import commodity groups, bilateral commercial trade initiatives, trade cooperation initiatives

EXPORT INCENTIVES
Star export houses, Duty Entitlement Passbook (DEPB) Scheme, Export promotion capital goods scheme (EPCG), Duty Free Replenishment (DFRC), Export credit guarantee cooperation (ECGC), Institutional infrastructure for exports, EPCs

FOREIGN TRADE POLICY
Foreign trade policy 2004-09: special focus initiatives, export promotion schemes, focus markets, regional focus initiatives, role of EXIM Bank in India.

IMPORTANT ISSUES
Role of state trading organizations, SEZs, agriculture export zones, Impact of WTO on India's trade policy.

References:
1. Paras Ram, Export: What, Where & How, Anupam Publications.
2. Export- Import policy, Naleh Publications
3. K. Aswathapa, International Business, Tata MegrawHill
4. Kaur, Narinder, India's Exports, Deep and Deep Publication
5. Mahajan, V.S, India's Foreign Trade and Balance of Payments, Deep and Deep Publication

MBA-249, (MBA-345, OLD)   **INTERNATIONAL TRADE LOGISTICS**
(3.5 Credits, 3-1-0)

INTRODUCTION
Marketing Logistics: concept, objectives and scope, systems elements, relevance of logistics in international business, transportation activity-internal transportation, inter-state goods movement, concepts of customer satisfaction

STRUCTURE
Structure of shipping- characteristics, liner and tramp operations, code of conduct, freight structure and practices, chartering principles and practices, UN convention on shipping.

OCEAN TRANSPORTATION
Containerization, CFS and inland container depots, dry ports, multimodal transportation, role of intermediaries including freight booking, shipping agents, ship owner and shipper consultation arrangements

AIR TRANSPORT
Total cost concept, advantages, freight structure and operations, carrier consignee liabilities

PORT SYSTEM
Port organization and management, responsibilities of port trust, growth and status of ports in India, carriage of goods-legal aspects.

INVENTORY
Inventory management, concepts, significance and types of warehousing facilities, total cost approach to logistics.

References:

1. Asopa, V.N. Shipping Management: Cases and concepts, Macmillan
2. Desai, H.P., Indian shipping Perspectives, Anupam Publications.
3. Burt, Dobler, Starling,World Class Supply Chain Management, Tata Mcgraw Hill
4. S.K Bhattacharyya, Logistics management, S.Chand
5. Panda, Sahadev, Sales and Distribution Management, Oxford

MBA-220, (MBA-415, OLD)   INTERNATIONAL STRATEGIC MANAGEMENT
(3.5 Credits, 3-1-0)

INTRODUCTION

Identify Strategic Alternative: nature and dimensions of International strategic management, function of international strategic planning, pre-requisites and complexities of international business strategy.

FOREIGN MARKET ENTRY

Strategies for foreign market entry and penetration, international business integration, strategy for risk and stability, revival strategies, mergers & acquisition, strategic alliance, restructuring and divestment

APPROACHES

Approach to strategy formulation, traditional approach, modern approaches- gap analysis, capital investment theory, ANSOFF, adaptive search approach, portfolio approaches- Boston Model, GE- Mckinsey Model, Hofer's Model, shelf's directional policy model

IMPLEMENTATION

Role and responsibility of corporate leader, impact of competition, corporate culture and personal values, organizational structure for strategy formulation, factors of successful implementation of multinational strategy

References:

1. Ansoff, H.I, Corporate Strategy, Mcgraw Hill
2. Garpund J and Farmer RN, International Permizations of Business Policy & strategy, Kent Publishing
3. Porter, M.E, Competitive Strategy, Free Press, NY

MBA-230, (MBA-425, OLD) INTERNATIONAL MARKETING
(3.5 Credits, 3-1-0)

INTRODUCTION TO INTERNATIONAL MARKETING
International Marketing- definitions, nature, scope and benefits, reasons and motivations underlying international trade and international business, basic modes for entry, process of international marketing, domestic marketing versus international marketing

INTERNATIONAL MARKETING ENVIRONMENT
International Marketing Environment, WTO framework and international marketing, factors influencing international market selection and segmentation, selection strategies, international marketing planning and control

INTERNATIONAL MARKETING MIX
International marketing Mix, international product policy and planning, international product mix, branding, labeling, packaging and organization of product warranties and services, International pricing policies strategies, the process of price setting, pricing decisions, information for pricing decisions.

INTERNATIONAL ADVERTISEMENT
International Advertising: international advertising strategy, elements of advertising strategy, media strategy.

GLOBAL DISTRIBUTION MANAGEMENT
International distribution management, international distribution channels, international distribution policy, selection of distribution channels.

References:

1. Sak Onkvisit and John Shaw, International Marketing (Analysis and strategy), Prentice Hall of India
2. Vern Terpestra and Ravi Sarathy, International Marketing, Thomson
3. R.L. Varshney and B. Bhattacharya, International Marketing, Sultan Chand Publications
4. International Marketing, Joshi, Oxford
5. Lee & Carter, Global marketing Management, Oxford

MBA-240, (MBA-435, OLD)   INTERNATIONAL FINANCIAL MANAGEMENT
(3.5 Credits, 3-1-0)

FOREIGN EXCHANGE MARKET:
Environment of International Financial Management, Balance of Payments, Means of International Payments, Foreign Exchange Market, Currency Future and Options Markets, Foreign Risk Management

RISK MANAGEMENT:
Exchange Risk, Political Risk, Interest Rate Risk, Measuring and Managing Foreign Exchange Exposure, Determination of Exchange Rate, Exchange Market and Arbitrage, Exchange rate Control, Practical Problems.

FINANCING OF INTERNATIONAL OPERATIONS:
Financing of Exports and International Investments. International Monetary Systems, European Monetary System, International Monetary and Financial Institutions.

FINANCIAL MANAGEMENT OF MNCS:
Multinational Financial Management : Capital Budgeting decisions for Multinational Corporation ,Financing Decisions –Cost of Capital and Financial Structure, Working Capital Management and Control, International Transfer Pricing, Cases and Problems.

References:
1. Shaprio: Multinational Financial Management, Prentice Hall of India, New Delhi.
2. Buckley, A. : Multinational Finance, Prentice Hall of India, New Delhi.
3. Apte, P. G. : International Financial Management, Tata McGraw Hill, New Delhi.
4. Thomas, International Finance, Oxford University Press
5. Avdhani, V. A, International Financial Management, Vikas Publication

MBA-250, (MBA-445, OLD)   INTERNATIONAL BUSINESS LAWS
(3.5 Credits, 3-1-0)

INTRODUCTION
Legal framework of international business: nature and complexities, major laws and their implications to business, international business contract-legal provisions, payment terms

INTERNATIONAL SALES AGREEMENT
Rights and duties of agents and distributors, contract of affreightment (carriage of goods by sea, air and overland), enforcement and settlement: contracts and dispute settlement, international commercial arbitration

WTO FRAMEWORK
Regulatory framework of WTO, provisions of WTO relating to preferential treatment to developing countries, implications of GATS, TRIPS and TRIMS

TECHNOLOGY TRANSFER
Regulations & treaties relating to technology transfer, licensing, franchising, joint ventures, patents and trade marks

CURRENT ISSUES
FDI and FII, setting up offices and branches abroad, outsourcing.

References:

1. Daniels, John, Ernest W.Ogram and Lee H. Redebough, International Business Environments and Operations
2. Kapoor N.D, Commercial Law, Sultan Chand & Co.
3. Lew, Juiton D.M and Clive Scandbrook, International Trade Law and Practice, Eurmancy Publications.
4. Richard Schaffer , Beverley Earle, Filiberto Agusti , International Business Law and Its Environment, South-Western College

MBA-108   COMPUTING SKILLS
(2 Credits, 1-2-0)

Introduction to Computers, Operating Systems (WINDOWS).

Word Processing: MS Word, Graphics, Power point, familiarity with Excel spread sheet and Data Base. Appreciation to special packages for management applications (SPSS, Dynamo, OR packages, Expert Choices).

Introduction to C-Data types and sizes, Variable declaration, operators, type conversion, conditional expressions, special operators, Precedence Rule. Control structures – Statements and Blocks, if-then-else, switch, while, for, do-while, break, continue, goto, levels. Functions and program structure, recursion, arrays, pointers, structure and union, standard I/O, standard library functions, files and pre-processing, string processing in C.

Introduction to Business Application softwares.

Reference:

1. The C Programming Language: Keringhan, & Ritchie
2. Let us C: Y. Kenithker
3. Pointer in C: Y. Kenithker
4. Programming with C: Gostfried

MBA-115   COMPUTER APPLICATIONS IN MANAGEMENT
(3 Credits, 2-0-2)

Unit-I
Introduction to Computer: Components, Operating System, memory management, CPU management, Application of Computer in Business, Computer Languages.

Unit-II
Programming in C: Variables, Operators, expressions, control statements – if, else, for, while, do-while, switch, break, continue, arrays: 1-d and 2-d, functions.

Unit-III
Introduction to database : Concept, Objectives, Advantage & limitations, E-R Diagram, relational databases- Introduction to integrity, redundancy, tables and their relation.

Unit - IV
Computer Networks : Concepts of data transmission, transmission channel, half-duplex transmission, modems.
Network Topology, Packet Transmission. Long Distance communication, Network Applications, client server computing.

Unit-V
Internet: Internetworking, Concepts, Introduction to OSI, TCP/IP reference models, cryptography, Internet Protocol Addresses, ISP, Ipv6, HTTP, Security, Internet Applications, E-Commerce: Fundamentals; Framework, Application.

Lab: Windows- Basic functionality, MS Office, MS Word, MS Excel, MS Powerpoint, Programming in C, Statistical Software Package, Web Designing in HTML, Internet Surfing.

Suggested Readings:
1. Rajaraman, V, Fundamentals of Computers, Prentice Hall of India, N.Delhi.
2. Yashwant Kenithker, Let us C.
3. Douglas E Comer, Computer Networks & Internet, Pearson Education
4. Ivan Bayross, HTML, DHTML, Javasript, BPB Publication.
5. Navathe , Fundamental of Database system, Addison Wesley.

MBA 204   MANAGEMENT INFORMATION SYSTEM
(3.5 Credits, 3-1-0)

INFORMATION SYSTEM CONCEPTS:
Definition, and Importance of Information, Types of Information: Strategic and tactical Information, Operational Information, Economic Quality, and Dimensions of Information: Economic Dimension, Business Dimension, Technical Dimensions.

INFORMATION SYSTEM FOR STRATEGIC ADVANTAGE:
Strategic role of information system, breaking business barriers, reengineering business process, improving business qualities.

SYSTEM DEVELOPMENT:
Modern Information system SDLC, Structured Methodologies, Designing Computer based methods, procedures, control, Designing structured programs.

INFORMATION SYSTEM:
Computer Based Information System (CBIS), MIS as a part of CBIS, IT & MIS, MIS characteristics, MIS Function, MIS along with TPS, OAS and DSS: Overview, components and classification, steps in constructing a DSS, role in business, group decision support system. The organization as a system and Role of CBIS in an Organization, MIS Models, Functional application of MIS (viz. Marketing IS, Manufacturing IS, Accounting IS, Financial IS, Personal IS, Production IS), Management Dimension of MIS, MIS support to Each Level of Management (viz. Top Level Management, Middle Level Management, First- Line Or Supervisory).

IMPLEMENTATION AND CONTROL
Control- Testing Security, coding techniques, detecting error, Validation, Cost-Benefit Analysis: Assessing the value and risk of the information system.

SYSTEM AUDIT
Software engineering qualities- design, production, service, software specification, software metrics, software quality assurance.

TEXT BOOKS
1. Brien, James A.O, Management Information System, Tata McGraw Hill, N. Delhi.
2. More references to be added later.

MBA 108   MANAGEMENT INFORMATION SYSTEM
(3.5 Credits, 3-1-0)

INFORMATION SYSTEM CONCEPTS:
Definition, and Importance of Information, Types of Information: Strategic and tactical Information, Operational Information, Economic Quality, and Dimensions of Information: Economic Dimension, Business Dimension, Technical Dimensions.

INFORMATION SYSTEM FOR STRATEGIC ADVANTAGE:
Strategic role of information system, breaking business barriers, reengineering business process, improving business qualities.

SYSTEM DEVELOPMENT:
Modern Information system SDLC, Structured Methodologies, Designing Computer based methods, procedures, control, Designing structured programs.

INFORMATION SYSTEM:
Computer Based Information System (CBIS), MIS as a part of CBIS, IT & MIS, IT Infrastructure, MIS characteristics, MIS Function, MIS along with TPS, OAS and DSS. Overview, components and classification, steps in constructing a DSS, role in business, group decision support system. The organization as a system and Role of CBIS in an Organization, MIS Models, Functional application of MIS (viz. Marketing IS, Manufacturing IS, Accounting IS, Financial IS, Personal IS, Production IS), Management Dimension of MIS, MIS support to Each Level of Management (viz. Top Level Management, Middle Level Management, First- Line Or Supervisory), Business value of Information Systems and Managing Change, Managing International Information System.

IMPLEMENTATION AND CONTROL
Control- Testing Security, coding techniques, detecting error, Validation, Cost- Benefit Analysis: Assessing the value and risk of the information system.

TEXT BOOKS
1. Kenneth C. Laudon, Jane P. Laudon, Management Information System, Pearson Education.
2. Brien, James A.O, Management Information System, Tata McGraw Hill, N. Delhi.
3. Ralph M. Stair, George W. Reynolds, Principles of Information Systems, Thomsons Learning.
4. Waman S. Jawadekar, Management Information Systems, Tata McGraw Hill.

Item 12.13: To Consider and approve changes proposed in the scheme of B.Tech. Computer Engineering and Information Technology.

The Board of Studies of the Computer Engineering Department in its meeting held on 16.12.2008 approved some changes in the scheme of B.Tech. Computer Engineering and Information Technology. The details are contained in the minutes of BOS meeting which are placed as Appendix 12.13 from page 220 to 221.

The Senate may kindly consider and approve the same.

DEPARTMENT OF COMPUTER ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA
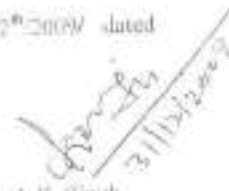
No.CO/2008/ 引 ↱ ⊥

Dated: 31.12.2008

Sub: Agenda papers for the 12 meeting of the SCSA/Senate

Keeping in view the request from the Chairman, Department of Mathematics and considering the resource constraints of Department of Electronics and Communication Engineering, following changes have been proposed in the scheme of B.Tech. Computer Engineering and Information Technology. The decision of BOS, in this regard, is enclosed. These changes will be effective from 1.1.2009. Hence, the item may please be put before the next SCSA/Senate for consideration and approval.

This is with reference to your letter No.ACad./Senate 12th2008/ dated 26.12.2008.

A.K. Singh
Chairman

Prof. I/C (Acad. Affairs & Senate)

Department of Computer Engg.
National Institute of Technology
Kurukshetra-136119

CO/08/ 3 7 1

Sub: Minutes of BOS meeting.

A meeting of BOS was held on 16.12.08 at 10:30AM in the office of Chairman. Keeping in view of the request from the Chairman, Department of Mathematics and considering the resource constraints of Department of Electronics and Communication Engineering, following changes in the schemes code of B.Tech CO & IT were approved.

1. B.Tech (Computer Engineering)

Name of Subject	Existing		Proposed	
	Code	Semester	Code	Semester
Unix and Linux Programming	COT-305	5th Sem.	COT-210	4th Sem.
Unix and Linux Programming (Pr)	COT-315	5th Sem.	COT-218	4th Sem.
Analog and Digital Communication	ECT-232	4th Sem.	ECT-331	5th Sem.
Analog and Digital Communication (Pr)	ECT-234	4th Sem.	ECT-333	5th Sem.

2. B.Tech (Information Technology)

Name of Subject	Existing		Proposed	
	Code	Sem.	Code	Sem.
Communication Systems	IT-210	4th Sem.	ECT-335	5th Sem.
Communication Systems (Pr)	IT-220	4th Sem.	ECT-337	5th Sem.
Mathematics -V	MAT-301	5th Sem.	MAT-206	4th Sem.
Operating System (Pr)	IT-317	5th Sem.	IT-222	4th Sem.
Information Security	IT-141	6th Sem	IT-122	6th Sem
Advanced Database	IT-142	6th Sem	IT-124	6th Sem
VHDL	IT-143	6th Sem	IT-326	6th Sem

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CHAIRMAN

Item 12.14: To consider the reports of two Workshops on examination reforms & rationalization of B.Tech. Scheme held on 19.12.2008 & 10.01.2009 respectively

Two one-day workshops entitled "Examination Reforms on IIT Pattern" and "Rationalization of B.Tech Scheme" were organized in the Institute on 19.12.2008 and 10.1.2009 respectively. The reports of the workshops are enclosed as Appendix 12.14 from page 223 to 225

The Senate may kindly consider these reports.

EXAMINATION CELL
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

REPORT OF THE
ONE-DAY WORKSHOP ON EXAMINATION REFORMS ON IIT PATTERN
DECEMBNER 19, 2008

The Examination Cell organized a Workshop on Examination Reforms on IIT

Pattern on Friday, December 19, 2008.

All the regular faculty members of the Institute attended the Workshop.

Dr. M N Bandyopadhyay, Director NITK inaugurated the Workshop and

delivered the Inaugural Address.

The Resource Persons were:

- Dr. A N Jha, Professor of Electrical Engg., IIT, Delhi.
- Shri K P Singh, Deputy Registrar (Academic), IIT, Delhi.

The experts discussed the IIT Examination System in detail with the faculty

members of the Institute. The Workshop concluded with a Question and Answer Session

where the two Resource Persons answered a variety of questions from the participants.

Finally, it was decided that the full IIT Examination System may be adopted by

the Institute in a phased manner.

(Rajender Kumar)
Controller of Exams.

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Report of The
Workshop on Rationalization of B.Tech. Scheme
January 10, 2009

The Institute organized a Workshop on Rationalization of B. Tech. Scheme on

January 10, 2009.

All the Chairmen and Senate members of the Institute attended the Workshop.

Dr. M N Bandyopadhyay, Director NITK inaugurated the Workshop and

delivered the Inaugural Address.

The Resource Persons from IIT Delhi were:

- Dr. S R Kale, Professor & Dean (Undergraduate Studies)
- Dr. S C Kashyap, Professor, Deptt. of Physics
- Dr. S K Jain, Professor, Management Studies Centre

Dr. Santanu Chaudhury, Professor & Associate Dean (Undergraduate Studies) could not

come.

The experts presented and discussed the B. Tech. Scheme of IIT Delhi vis-à-vis

the existing scheme at NIT, Kurukshetra. It was followed by an interactive session in

which Senate members & Chairmen expressed their views. The Workshop concluded

with the following observations by the experts:

1. The contact hours be reduced as the students are over burdened with 35 hours per
   week. They need to be given more time for self study by reducing the teaching load
   to about 30 hours per week. All the existing courses should be retained and
   reduction in teaching load be effected proportionately.

2. Flexibility be given to a teacher in deciding sessional sub-components & respective weightages.

3. Instead of a system of awarding absolute grades (conversion of marks into grades), a system of relative grading be adopted.

4. Efforts be made to recruit permanent faculty from reputed institutes. As a solution to the problem of faculty shortage, it was suggested that emphasis be laid on web-based learning. In addition, the concept of large lecture groups may also be considered.

5. Steps be taken to address the problems of lack of good communication skills and physical fitness in the students.

Co-ordinators

(Ashwani Jain)   (P J Philip)   (Rajender Kumar)

Item 12.15: To consider and approve modified scheme and syllabi of B.Tech. IEM 7th & 8th Semesters

The Board of Studies of the Mechanical Engineering Department has approved by circulation some modifications in the scheme and syllabi of B.Tech. (Industrial Engineering & Management) 7th & 8th semesters to be effective from 2009-2010. The recommendations of the Board of Studies conveyed to the Academic Section by the Chairman, Mechanical Engineering Department vide letter no. MED/09/36 dated 12.01.2009, scheme (old & new) & syllabi (new) are enclosed as Appendix to Item No. 12.15.

The Senate may kindly consider and approve the same.

Item 12.16: To consider the request of Chairman Electronics & Comm. Engg. Department to review Clause R-7.4.1 of Ph.D Ordinance & regulations

The Chairman, Electronics & Communication Engineering Department vide letter no. ECE/08/1132 dated 18.12.2008 requested for reviewing the Clause R-7.4.1 of the Ph.D Ordinance and Regulations. His request was placed in the 21st SCSA meeting held on 19.12.2008. The SCSA decided to refer this clause to the Senate. The request of the Chairman & details of the Clause R-7.4.1 are enclosed as Appendix 12.16 from page 228 to 229.

The Senate may kindly consider the same.

Electronics and Communication Engineering Department
National Institute of Technology, Kurukshetra

No. ECE/08/ 1522   Dated: 18.12.2008

This has reference to the SCSA meeting to be held on 19.12.2008. In continuation to agenda item 5, I hereby propose to consider the Clause R-7.4.1 for reviewing the leave period from 18 months to 24 months to continue to be the Ph.D. supervisor.

The proposal is submitted for kind consideration as an addendum to agenda item 5.

Brahmjit   18-12-08
(Brahmjit Singh)
Chairman

Dean, Academic

Copy to:
1. DS to Director with the request to Director for consideration of the proposal
2. Professor in-Charge, Academic Affairs

retirement, or death; an alternative supervisor may have to be appointed. In such special cases, the appointment of the supervisor will be regulated as under:

R-7.4.1   A Supervisor proceeds on leave of one month or more

(i) If the synopsis of the thesis of the scholar has not yet been submitted,

a) and the supervisor proceeds on leave for one month or more but less than 18 months, then the supervisor should immediately inform the chairman DRC, whether he will continue to guide and supervise the research work of his scholar effectively during his leave period or not. In case he does not inform within five days of the commencement of his leave, or informs that he will not be able to guide effectively, then he ceases to be the supervisor of that scholar.

b) and if at any point of time, the total period of long (a month, or greater) leaves of the supervisor of a scholar equals or exceeds 18 months, that supervisor automatically ceases to be his/ her supervisor.

c) and if a supervisor proceeds on leave for 18 months or more, he ceases to be the supervisor.

d) and once a supervisor ceases to be the supervisor, he can not again become the supervisor of that scholar.

In above cases a), b), c) and d), when a supervisor ceases to be the supervisor, the other supervisor (of NITK) if there, shall act as the supervisor; and if there is no 'other' supervisor, the DRC shall immediately appoint alternative supervisor for the scholar.

(ii) If the thesis/ synopsis of the thesis has been submitted before the supervisor proceeds on leave,

and he consents to continue to be the supervisor, then he can continue to be so. If he declines, and there is no co-supervisor (of NITK), a caretaker supervisor will have to be appointed.

Further, if major revision becomes necessary, and the co-supervisor or the caretaker supervisor provides the required help in carrying out the major revision, he will automatically be treated as a supervisor of that candidate.

R-7.4.2   A Supervisor retires

A faculty member who is due to retire within the next two years from the date the DRC meets to appoint a supervisor, can not be appointed a supervisor. If a faculty member on retirement informs that he shall continue effectively supervising the scholar, can continue as a supervisor, if either reemployed, or appointed Emeritus Fellow, or the synopsis of the thesis has been submitted, or the Director is convinced of his/her availability/continued guidance to the scholar and permits him to continue. If necessary, alternative/ caretaker supervisor be appointed by the DRC.

R-7.4.3   A Supervisor resigns

If necessary, alternative/ caretaker supervisor be appointed by the DRC.

Item 12.17 To consider the request of old B.Tech students for granting mercy chance for appearing in their remaining papers.

Two old B.Tech students namely Sh. Hemant Tumram, Roll No. 2K-112 and Sh. Sinoj Gopi, Roll No. 2K-120 made a request for granting mercy chance for appearing in their remaining papers. Their requests were placed in the 20th meeting of the Standing Committee on Senate Affairs but the same were rejected by the SCSA. Again in 21st meeting of the SCSA held on 19.12.2008, under any other item, it was decided that the requests for granting mercy chance to the old B.Tech. prior to 2K2 batch students, Sh. Hemant Tumram, Roll No. 2K-112 and Sh. Sinoj Gopi, Roll No. 2K-120, who had been admitted to the Institute under Kurukshetra University regulations, may be placed before the Senate for consideration. The request of these students are enclosed as Appendix 12.17 from Page 231 to 236.

The Senate may consider and decide the cases.

The Dean Academic
NIT Kurukshetra

D.S (Acad)

8/11/2008

Sinoj Gopi
Roll No: 2k-120
B.Tech, Mechanical Engg.
NIT Kurukshetra

SUB: REQUEST FOR MERCY CHANCE

Respected Sir,

I Sinoj Gopi (Roll No: 2k-120), am a student of B.Tech, Mechanical Engg, 2000-04 batch. I had requested in a previous letter to give me a mercy chance to attempt and clear my last remaining papers to obtain my B.Tech degree. Unfortunately I have been denied a chance to do that as my last request was not granted. As you would have already identified, I joined this institute when it was RECK and hence I have been forced to abide by the then existent rules of this institution. This meant that I missed my chance to write a couple of papers due to the rules change at the time when this institution changed over to NITK.

Also the senate of this institution has relaxed the criterion before so as to award additional chance to old students to complete their B.Tech Degree. Students up to the 1998 batch of this institution have availed this chance to complete their degrees. That being the case for other REC students, we also request the same facilities be given to us as given to other fellow REC students.

The senate had approved the following item in the article to give one additional chance to all candidates in its senate meeting:

Item no 8.18.: "To consider relaxation in criterion to award additional chance to old students to complete their B.Tech degree course."

The senate approved to allow one additional chance to all candidates mentioned in the agenda and all other candidates who could not apply for the additional chance as a onetime measure. The other students who could not apply can avail this one additional chance in June 2007 exams.

Since I am in a similar position at this point of time, I request the senate to provide me with a similar opportunity.

I have been trying hard to clear my papers over this period of time, which would show you my level of desire in obtaining this degree. I sincerely request you to grant me a mercy chance as I have only four subjects remaining to complete my degree requirements. It is also to be noted that I have not used my mercy chance at any point of time till now.

I am sure that I would be able to clear my four remaining papers by working very hard towards achieving that goal of mine. I would be grateful if you could give me a chance to do the same by granting me a mercy chance.

My weak financial background forced me to take up a job immediately after four years of college education, because of which I could not devote my full attention towards obtaining the degree. I have two younger sisters waiting for financial help from me for their marriage. With the B.Tech degree I would be able to fulfil the dreams of my family members as a son and a brother. But all this would happen only with your blessings and well wishes.

Yours Truly,

Sinoj Gopi
2k-120
B.Tech Mechanical Engg

The Dean Academic
NIT Kurukshetra

8/11/2008

Hemant Tumram
Roll no 2k-112
B.Tech Mechanical Engg.

SUB: REQUEST FOR MERCY CHANCE

Respected Sir,

I am Hemant Tumram a student of mechanical Engg. 2000-04 batch; roll no 2k-112. I had requested in a previous letter to give me a mercy chance to attempt and clear my last remaining papers to obtain my B.Tech degree. Unfortunately I have been denied a chance to do that as my last request was not granted.

Also the senate of this institution has relaxed the criterion before so as to award additional chance to old students to complete their B.Tech Degree. Students up to the 1998 batch of this institution have availed this chance to complete their degrees. That being the case for other REC students, we also request the same facilities be given to us as given to other fellow REC students. The senate had approved to give one additional chance to all candidates before and this is all what we request in our case as well.

I have been trying hard to clear my papers over this period of time, which would show you my level of desire in obtaining this degree. I sincerely request you to grant me a mercy chance as I have only **one paper remaining in my fourth semester i.e. MAE-202 to** complete my degree requirements.

The senate had approved the following item in the article to give one additional chance to all candidates in its senate meeting:

+ no 8.18.: "To consider relaxation in criterion to award additional chance to old students to complete their B.Tech degree course."

The senate approved to allow one additional chance to all candidates mentioned in the agenda and all other candidates who could not apply for the additional chance as a onetime measure. The other students who could not apply can avail this one additional chance in June 2007 exams.

Since I am in a similar position at this point of time, I request the senate to provide me with a similar opportunity. It is also to be noted that I have not used my mercy chance at any point of time till now.

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I am sure that I would be able to clear my one remaining paper by working very hard towards achieving that goal of mine. I would be grateful if you could give me a chance to do the same by granting me a mercy chance.

Please consider this heartfelt request as eight years of my life spent in obtaining this degree would count to nothing if I am denied a chance to write this one remaining paper this time. Also my family background and financial status would make it all the more difficult for me to continue without this degree. My father is a heart patient and the financial and mental strain involved in his treatment has taken its toll on my academics as well as my wellbeing. The college which has been kind enough to provide for all of its students should take a merciful stance in my case as well. Please consider this as a plea from a helpless student to his bhagwan.

I am the sole breadwinner for my family at this point of time and it is very unfortunate that one paper would deny me a chance to obtain my degree and hence a secured life. This one chance could mean a lot to me as I would remain only a 12th pass even after completing my degree with the exception of just one paper. The amount of hard work that I have put in all these years and my family's prayers all along would count for nothing if I do not graduate. I find it difficult to face my heart patient father without my degree and after eight years of time spent in this college. Also I have not used a mercy chance till now and I am sure that this one chance is all that I need for the security of my family. The college has always shown leniency towards its students and have given many students mercy chances in their last attempts to obtain a degree and I request you to grant me also a chance for the same.

I hope you consider my case with heartfelt leniency as you would towards a student and a son. I and my family would be grateful to you throughout my life for giving me this one opportunity. I also promise you that I will do my best and work hard with full devotion this time to clear this one remaining paper.

Yours Truly

Hemant Tumram
Roll no 2k-112
B.Tech Mechanical Engg.

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The Dean Academics
NIT Kurukshetra

23/10/2008

Hemant Tumram
Roll no 2k-112
B.Tech Mechanical Engg.

SUB: REQUEST FOR MERCY CHANCE

Respected Sir,

I am Hemant Tumram a student of mechanical Engg. 2000-04 batch; roll no 2k-112. I have been trying hard to clear my papers and unfortunately I have run out of chances to do so. I am very determined to clear my only remaining paper which would complete my degree.

My weak financial background forced me to take up a job immediately after four years of college education, because of which I could not devote my full attention towards obtaining the degree. I am the sole breadwinner for my family at this point of time and it is very unfortunate that one paper would deny me a chance to obtain my degree and hence a secured life. This one chance could mean a lot to me as I would remain only a 12th pass even after completing my degree with the exception of just one paper. The amount of hard work that I have put in all these years and my family's prayers all along would count for nothing if I do not graduate. Also I have not used a mercy chance till now and I am sure that this one chance is all that I need for the security of my family. The college has always shown leniency towards its students and have given many students mercy chances in their last attempts to obtain a degree and I request you to grant me also a chance for the same. I have only one paper remaining in my fourth semester i.e. MAE-202.

I hope you consider my case with heartfelt leniency as you would towards a student and a son. I and my family would be grateful to you throughout my life for giving me this one opportunity. I also promise you that I will do my best and work hard with full devotion this time to clear this one remaining paper.

Yours truly,

Hemant Tumram
Roll no 2k-112
B.Tech Mechanical Engg.

The Dean Academics
NIT Kurukshetra

21/10/2008

Sinoj Gopi
Roll No: 2k-120
B.Tech. Mechanical Engg.
NIT Kurukshetra

SUB: REQUEST FOR MERCY CHANCE

Respected Sir,

I Sinoj Gopi (Roll No: 2k-120), am a student of B.Tech, Mechanical Engg, 2000-04 batch. I have been regularly trying to clear my papers over the course of time which would show you my level of desire in obtaining this degree. But unfortunately I have run out of chances in my attempts to do so. I sincerely request you to grant me a mercy chance as I have only four subjects remaining to complete my degree requirements. It is also to be noted that I have not used my mercy chance at any point of time till now.

I am sure that I would be able to clear my four remaining papers by working very hard towards achieving that goal of mine. I would be grateful if you could give me a chance to do the same by granting me a mercy chance.

Please consider this heartfelt request as eight years of my life spent in obtaining this degree would count to nothing if I am denied a chance to write the four remaining papers this time. Also my family background and financial status would make it all the more difficult for me to continue without this degree.

Yours Truly,

Sinoj Gopi
2k-120
B.Tech Mechanical Engg.

contact no 9846824975

12th MEETING OF

SENATE

Tabled Agenda

NATIONAL INSTITUTE OF TECHNOLOGY

KURUKSHETRA

DUE DATE OF MEETING: 19th JANUARY, 2009

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

Tabled Agenda	:	12th Meeting of the Senate
Venue	:	Senate Hall, NIT, Kurukshetra
Date & Time	:	19th January, 2009 at 11:00 AM

Tabled Item No.	Agenda Item	Pages
12.19	To consider draft constitution of students representatives	237-271

Item 12.19: To consider draft constitution of students representatives

The draft constitution of student representatives as submitted by the students was placed before the Standing Committee on Senate Affairs in its 20th meeting held on 31.12.2008. In the meeting, it was decided that suggestions/modifications in the constitution of students representatives may be invited for consumption of faculty, students and administration. Again the SCSA in its 21st meeting held on 19.12.2008 decided that a core group as suggested by the students cannot come into existence without prior approval of higher body like the Senate or the BOG as the Director may deem fit. However, SCSA approved the required students body to look after the academic matters of the students. The students, now, have proposed a draft constitution of Students Representatives as followed by IIT, Madras which is enclosed as Appendix 12.19 on page from 238 to 271.

Accordingly, the matter is placed before the Senate for consideration please.

PROPOSAL REGARDING STUDENT REPRESENTATION

As per discussion in the meeting held on 15ᵗʰ Oct 2008 between students and responsible faculty members, it was concluded that a better working of the institute can be achieved through more involvement through representation of students. Thus we propose an **activity based mode of representation**. We outline the following structure.

Student representation in the following areas :
1. Academic affairs
2. Hostel affairs
3. Placements and Internships
4. Sports activities
5. Cultural activities
6. Literary activities
7. Alumni coordination

We believe student representation in these areas will assist the faculty in-charge of the above affairs in having an opinion of the students **if and when required** in the process of policy making. It will also lend the faculty "legs" in the better running of the above affairs and will in future **prevent frequent changes in rules and policies framed**.

Academic Affairs (4 students)
Representation in Academic affairs will be one student from each year.
Eligibility - He/she is among the top 7 in their branch.
Representative from the Final year will be the Academic Affairs secretary and others will be the respective academic year representatives.

Hostel Affairs (8 students)
Representation from each of the hostels and one girls representative for both the girl's hostels **as proposed by the Chief Warden in consultation with respective Wardens and Mess Committees.**

Placements and Internships (2 students)
Representation from Final and Pre-Final year students as proposed by the Professor in-charge in consultation with the respective Placement Advisory Committees of the respective years.

Sports Activities (4 students)
The Year representatives and **Sports Activities secretary (i.e. final year representative)** will be as proposed by the Professor in-charge of sports in consultation with team captains of different sports.

Cultural Activities (1 student)
The **Cultural Secretary** will be chosen from among the various student secretaries of the Official Clubs (Music and Dramatics Club, Student's Activities Club, AVA and Photography Club) **as per mutual understanding and discussions between the Club Secretaries and all concerned Teachers in-charge.**

Literary Activities (1 student)

The **Literary Activities Secretary** will be chosen from among the various Student Presidents of the Official Societies (Electrureck, Microbus, Techsobyte, Mechsoc and Infrastructure) as proposed by the Teachers in-charge of various societies and the Teacher in-charge of Literati in consultation with the various Student Presidents and Secretaries of the Official Societies.

Alumni coordination (1 student)

The **Alumni coordination Secretary** will be as proposed by the Teacher in-charge of the Alumni association from among accepted applications. He / She will work in coordination with the Literary and Academic Secretaries for organizing various events and reunions.

General Secretaries (2 students)

Any organization requires leaders to coordinate various activities. The various secretaries defined above will be answerable to **two General Secretaries**. The **General Secretaries will be chosen from among the various Secretaries defined above by mutual understanding and discussion amongst themselves and a concerned Teacher in-charge allotted specifically for the purpose.** The chosen general secretaries will have to vacate their earlier positions held and a suitable replacement will be chosen for them.

In addition to the above there will be representation from the following :

- Girls Representative (1 student)
- M.Tech Representative (1 student)
- MCA Representative (1 student)
- MBA Representative (1 student)

The above 27 students will form the student representation or the Student Welfare Forum.

The above proposal is just a brief outline of the structure and the selection criterion. If given the blessings of the faculty and the Honourable Director, we will bring forward a detailed charter of the various responsibilities of each secretary.

This is the proposal brought forward by the students of NIT Kurukshetra in our limited wisdom, with which we can better run our institute and improve it to one day match the standards of the IITs.

Students NITK

STRUCTURE OF THE PROPOSED STUDENT'S WELFARE FORUM

This is an effort on our part to once again emphasize on the fact that the Student's Welfare Forum is in no way a parallel body, but in fact, it is an extension of the existing system will only add to it certain areas which were previously left out. This is merely an effort on our part to help in running the various events of our institute.
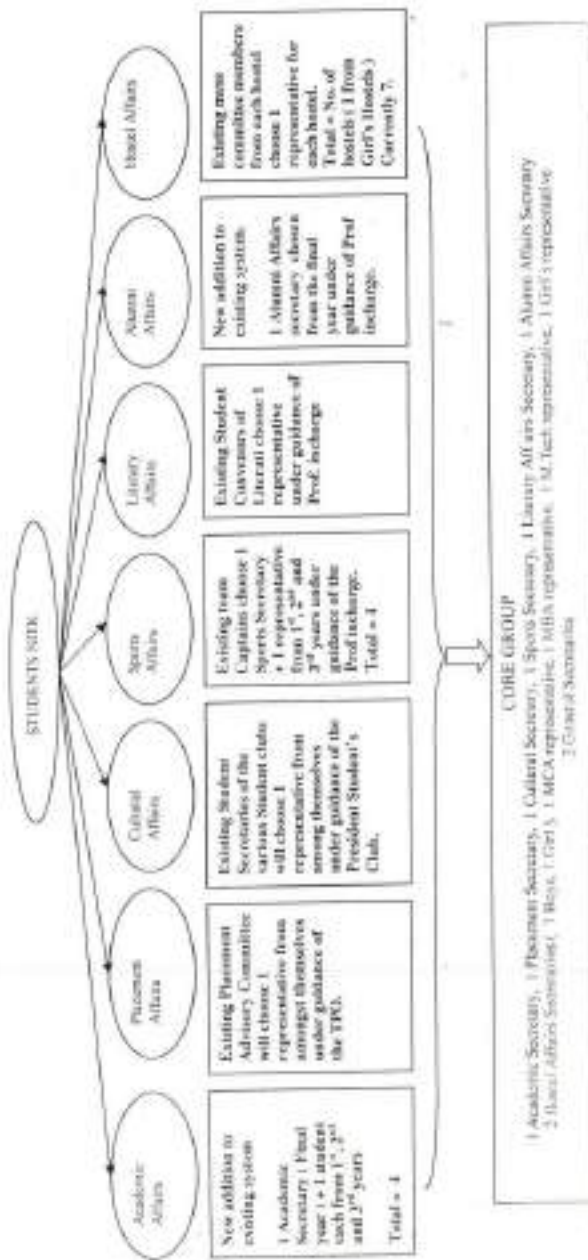
Respected Members of the Senate

As evident from the Student Affairs Council of IIT Madras, one of the elite institutes in India is following an almost identical form of student representation as that proposed by us. The basic ideas behind such a representation are

- Streamlining of the day to day workings of the college
- A more integrated and disciplined form of student representation

One of the most important points that we wish to convey is that we the students of NITK are not in favour of elections for any post in our proposed system. In the constitution that we wish to draft, the use of the ballot will be completely ruled out.

We reiterate, the sole reason for such a form of representation, is to strengthen and streamline the existing form and by doing so, contribute towards the growth and development of the country.

Students
NIT Kurukshetra

INDIAN INSTITUTE OF TECHNOLOGY, MADRAS

The Student Affairs Council (SAC) and the Executive Wing (EW) are the student bodies of the Institute which symbolize the spirit of mutual co-operation among the various sections of the campus community. The SAC functions as the central policy making body of the Institute and formulates its policies based on the demands and aspirations of the General Student Body (GSB). The EW is involved in the execution and implementation of these policies and is accountable to the SAC. Both the SAC and the EW are responsible to the GSB. The SAC constitution aims at " providing the students opportunities for overall personality development with the emphasis on leadership qualities and the spirit of service." (from the Preamble of the SAC Constitution)

The Executive Wing consists of the following members

- General Secretary
- Academic Affairs Secretary
- Research Affairs Secretary
- Hostel Affairs Secretary
- Sports Secretary
- Cultural Affairs Secretary (Lit)
- Cultural Affairs Secretary (Arts)

The members of the EW are elected by the General Student Body on a one-man one-vote basis. The elections are usually held during the third week of March every year, following which the elected representatives take over from their predecessors. The election of the Speaker of the SAC is held within 20 days of election of the members of the EW. The Speaker is elected by the SAC Councilors i.e. all the Hostel General Secretaries, branch councilors for the B.Tech programme, day scholars' councilors and class councilors from the M.Tech., M.Sc. and Ph.D programmes.

Every Executive is assisted by a Council of which he/she is a chairman. Policies can be recommenced and presented to the SAC for ratification. The executives are responsible for the performance of functions in their domain.

The General Secretary (GS) co-ordinates the work of other Executives and represents the GSB. Matters in areas which are not covered by other Executives are handled by the GS. The AAS represents the views of the GSB on academic matters and coordinates the functionality of facilities like the Library, the Computer Center, the Placement Office etc. and is also responsible for conducting IIT Madras' techno-scientific festival Shaastra. The Research Affairs Secretary (RAS) works in conjunction with the AAS, laying special emphasis on the specific problems and needs of Research Scholars. Hostel maintenance and issues concerning the hostel messes come under the purview of the Hostel Affairs Secretary (HAS). The Sports Secretary looks into issues regarding sports activities of the Institute teams, coaching and organizing inter-hostel and inter-collegiate tournaments.

The Cultural Secretaries work as a team and together with the Cultural Advisor and the other members of the faculty, organize Saarang , the annual Cultural Festival of the Institute and Bharat Utsav, a festival based on Indian Culture. They are also responsible for the organization and conduct of the inter-hostel cultural events.

The SAC Speaker convenes and conducts meetings of the SAC and is assisted by a Deputy Speaker of the SAC who acts as the Presiding Officer of the SAC meetings in the event of the absence of the Speaker.

- news
- Dean Students
- Constitution
- Representatives

Constitution

Dr.R. Srinivasan (Dean – Students), Convenor

Dr. Ananth M S

Dr. Kalyanaraman S
Dr. Manoharan P T
Ahobala Rao P
Chandramohan T A
Ganesh L S
Sethuram B K
Vijay Subramanian
Ghose A K
Manmohan Singh
Ms. Rapti Madhurawe
Ravi Subramanian
Uday Prakash M

First Revision – By the Senate sub-committee

Prof. R. Srinivasan Assisted by
Prof. Victor D J Ganesh L S
Prof. Kuriacose J C Uday Prakash M

Second Revision – 1997

Prof. P Srinivasa Roa (Dean – Students)
Arvind Desikan (Speaker, SAC)

INDEX

CHAPTER 1

PREAMBLE

This Constitution aims at providing the students opportunities for overall personality development with emphasis on leadership qualities and the spirit of service. It is hence based on the spirit of mutual co-operation among the various sections of the campus community.

The structure of this Constitution has been expressed in the formation of a Student Affairs Council (SAC) and an Executive Wind (EW). The nature if their interaction with each other and with the General Student Body (GSB) is defined below.
The SAC shall function as the central policy making body and these policies shall be based upon the experiences, demands and aspirations of the GSB.

The EW shall function as a body accountable to the SAC to execute and implement the policies of the SAC. However, the EW can put forth suggestions to, and advise the SAC as and when it deems necessary.
Both the SAC and the EW shall remain responsible to the General Student Body – the supreme power.

The functional manifestation of the spirit of the Constitution depends mainly on the integrity and the perspicacity of the SAC Councilors and the Executives. The members of the GSB will be strengthening this spirit by remembering:

"He only deserves freedom and life who conquers them anew" – Goethe

The various sections of the campus community shall, together, strive towards building an atmosphere imbued with warmth and the spirit of objective analysis, to attain the culture of a truly educated community.

CHAPTER II

STUDENT REPRESENTATIVE SET-UP

1. The Student Affairs Council (SAC) shall be the apex policy making representative body.

2. A. The members of the SAC will be elected from and by specific constituencies of the GSB. (Ref. Chap III, 2 A)

B. A faculty member shall act as an advisor to the SAC. The Dean of Students, in consultation with the Speaker and the Deputy Speaker of the SAC and the General Secretary, will suggest a panel of names to the Director for choice of a Faculty Advisor to the SAC. The Faculty Advisor shall aid the SAC in framing its policies, guidelines and resolutions, without participating in its voting.

3. The EW shall function as a body accountable to the SAC to execute and implement the policies of SAC. However, the EW members shall execute and implement these policies independent of SAC (Ref Chap IV, 1)

4. A. The EW shall consist of :
General Secretary (GS)
Academic Affairs Secretary (AAS)

Co-curricular Affairs Secretary(Co-AS)

Research Affairs Secretary (RAS)
Hostel Affairs Secretary (HAS)
Sports Secretary (SS)
Cultural Affairs Secretary-Literary (CAS – Lit)
Cultural Affairs Secretary –Arts (CAS – Arts)

B. The above posts shall be elected directly by the Student Body on a one-man one-vote basis.

5. A. The SAC shall set policies and guidelines towards the working of the EW.

B. All the Executives shall be individually accountable to the SAC for the

implementation of the policies in their respective domains.

C. The SAC Councillors shall actively help the Executives in discharging their duties.

6. The SAC shall form sub-committees on an ad-hoc basis to look into specific issues

(eg. A library sub-committee to look into library affairs)

7. The SAC shall nominate an Emergency Council (EC) to consider urgent issues during the vacations.

8. Student Representation to the Official Bodies of the Institute

A. The GS, the AAS and the RAS shall represent the GSB in the Senate.

B. The student representatives to all the official bodies of the Institute (such as the Hostel Management, Library Committee, Hospital Committee etc.) shall be proposed by the respective Executives and ratified by the SAC within a month of the beginning of the academic year.

C. The student representatives shall apprise SAC of all the issues dealt by the various official bodies of the Institute.

D. The student representatives shall necessarily project the views of the SAC to the official bodies of the Institute.

9. Campus Publications

A. The Campus Publications shall strive to develop and foster a sense of awareness in the GSB.
B. The Campus Publications shall be accountable only to the GSB.

10. Consultative Committee

A. The Dean of Students will nominate a Consultative Committee consisting of three faculty members and three students. The student members will be nominated in consultation with the Speaker and the Deputy Speaker of the SAC and the General Secretary.
B. The Consultative Committee shall be nominated soon after the initial formation of the SAC before the vacation. (Ref:Chap VII, I A, Note 2)
C. The Consultative Committee shall advise the SAC on the interpretation of the Constitution, when called for by the Speaker. However, the final interpretation of the Constitution rests entirely with the SAC.
D. The tenure of this Committee shall be the same as that of the corresponding SAC.

11. The SAC shall interact with all the official bodies and offices of the Institute as shown in the "Interaction Chart"

12. The Speaker, all members of the EW, all the Editorial Boards of the Campus Publications and the Film Club Secretary, as well as the Hostel General Secretaries have to present individual written reports covering their respective activities during each semester (Ref : Chap III, 4 A (b), 9)

13. General Guideline to SAC

The SAC shall make recommendations to the Director for resolving any issues arising out of the implementation of any of the provisions of this Constitution. These recommendations shall be made through the Board of Student, which shall in turn recommend these to the Senate.

CHAPTER III

THE STUDENT AFFAIRS COUNCIL (SAC)

1. Scope and Responsibilities

A. The SAC shall be the central and principal policy making body for the whole General Student Body (GSB). Its policies and guidelines shall be binding on all members of the Executive Wing (EW) and the GSB, unless the GSB overrules them by a referendum. (Ref: Chap VIII 10)

B. The members of the SAC shall be in continuous touch with the GSB. They shall apprise the GSB of issues of general or particular interest and shall implement the most representative view of the GSB in arriving at the policies, decisions and guidelines of the SAC.

C. The SAC shall form ad-hoc sub-committees to look into specific issues concerning the students.

D. The SAC shall nominate students to the Senate Standing Committee as and when required. The SAC may also withdraw the nomination for valid reasons (not presenting the view of the SAC). The procedure will be by impeachment. (Ref: Chap VIII, 9)

2. Composition of the SAC

A. Constituency Number from each constituency

a. Hostel

(i) General Secretary of each hostel – other than Sarayu 11

(ii) Sarayu – General Secretary + Hostel Councillor 2

(* The Hostel Councillor will be a UG or a PG student* such that both UGs and PGs are represented in the SAC)

b. Day Scholars – 1 representative 1

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c. BTech
(i) 1 Branch Councillor from each branch 8
(ii) 3 Class Councillors from the first year 3
d. MSc-1 Councillor each from the first and second years 2
e. MTech-3 Councillor each from the first and second years 6
f. MS- 1 Councillor each from the Engineering and Humanities
programs g. PhD 2
(i) 2 Councillors from the Engineering program 2
(ii) 2 Councillors from the Sciences program 2
(iii) 1 Councillors from the Humanities program 1
Total number of SAC Councillors 40

B. One faculty advisor (Ref: ChapII, 2B)

Note: A member of the EW cannot be a member of the SAC
3. Interaction with the EW
A. The SAC shall set the policies for the EW.
B. The EW shall report to the SAC and shall be answerable to the SAC for the execution of these policies.
C. All members of the EW shall attend the SAC meetings. (Ref: Article 5 G of this chapter).
D. The EW shall be free to put forth suggestions in the making of SAC policies.
E. Every member of the EW shall review his or her manifesto and activities twice a year at the SAC meetings that will be held for this purpose, in October and in February. The EW shall be answerable to the GSB, and the opinion of the GSB shall be reflected in the deciding of awards such as theInstitute Blues.
4. Office Bearers of the SAC

A. Speaker

a) The Speaker shall be the Presiding Officer on the floor of the SAC and heorshe shall be elected by the Councillors of the SAC. He or she cannot hold any elected post outside the SAC. He or she must be from the GSB and should not be a SAC Councillor.

b) Duties:
1. The Speaker shall be the Presiding Officer on the floor of the SAC and he or she shall be elected by the Councillors of the SAC. He or she cannot hold any elected post outside the SAC. He or she must be from the GSB and should not be a SAC Councillor.

2. The Speaker shall normally prepare the agenda for every SAC meeting and shall inform the members, the EW, the Campus Press and the GSB at least 48 hours in advance, except for Special Meetings (SM) (Ref: Article 5 J of this chapter) or Emergency Meetings (EW) (Ref: Articles 5 Q, R,S of this chapter).

3. The Speaker shall prepare and be responsible for communicating the approved minutes of each Regular SAC Meeting (RM) to the GSB within four day after approval. The minutes of a Special Meeting shall be put forward to the GSB within the next three days.

4. The Speaker shall send the minutes of Regular Meetings to all Councillors within three days of the meetings and if, within four days of the despatch, no objection is received, the minutes shall be treated as approved.

5. The Speaker shall be responsible for the maintenance of the following documents and for keeping them up to date:

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- The minutes of the SAC sessions for the immediate past five years.

- The reports of all committees, sub-committees, Institute and Editorial Boards and executives for the past five years.

· All correspondence from any individual or group of individuals of the GSB for the past five years.

· A copy of the Constitution and amendments.

6. The Speaker shall be responsible for the production of the above documents within 48 hours when demanded by any of the following:

- Councillors of the SAC

- The Faculty Advisor

- Members of the EW

- Campus Press

- The representatives of at least 25 signatories of the GSB

- Any other person or body authorized by SAC

7. The Speaker shall keep a check on the membership of the Councillors and the Executives the various committees, sub-committees, boards, etc.

8. The Speaker shall have a copy of the Constitution and its amendments during every SAC meeting and Emergency Council meeting.

9. The Speaker shall call for, compile and release to the GSB reports from:

- Individual members of the EW, covering the activities of the various Senate sub-committees, Institute Standing Committees, etc.

- Campus Editorial Boards

- Hostel General Secretaries

- Film Club Secretary (Students)

- SAC

- SAC sub-committees

This should be done twice every year, in the first weeks of November and April.

10. The Speaker shall be fully conversant with the Constitution, and shall, at the end of his or her tenure, recommend a course of action of his her succession.

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A. Deputy Speaker (DS)
a) The DS shall be appointed by the Speaker subject to ratification by the SAC. The DS is a Councillor who holds no other elected post outside the SAC. He or she shall be the Presiding Officer on the floor of the SAC in the absence of the Speaker.

b) Duties
1. When the Speaker is present –

- The DS shall assist the Speaker in all matters concerning the SAC

- The DS shall assist the Speaker in all matters concerning the SAC

2. In the absence of the Speaker –

- The DS shall act as the Speaker

- The DS shall appoint any other Councillor as Deputy

Note: The SAC shall elect at interim Speaker in the event of the absence of both the Speaker and the Deputy Speaker during any session.

5. Rules and Procedures in the SAC
All the SAC meetings shall be Regular Meetings unless declared Special Meetings.

(Ref: Article 5 J of this chapter)

A. Order of Transactions
a) The Speaker shall take items in the following order while conducting SAC meetings:

1. Ratification of draft minutes if necessary

2. Announcements

3. Unfinished transaction

4. Reports of the Executives

5. New transactions on the Agenda

6. Any item not on the Agenda with the support of 1/3 of the floor strength of the SAC or 50 persons of the GSB.

b) The order of transactions may be modified by a simple majority of the SAC.

B. Frequency of SAC meetings
The interval between two successive meetings shall not exceed five weeks so as to make up a minimum of three meetings a semester, starting from the day of enrolment. The meetings shall be distributed evenly throughout the semester.

C. Convening of extraordinary SAC meetings

The Speaker shall convene Regular Meetings within a week of a requisition in writing by:
1. At least 1/3 the strength of SAC or
2. A group of 50 persons or more of the GSB
Note: One representative of the 50 persons shall have the right to speak on the floor of the SAC.

D. Quorum

a) The quorum for an RM of the SAC shall be half the current strength of SAC
b) The quorum for any SM of the SAC shall be 2/3 of the current strength of the SAC
c) If the floor strength of a SAC meeting falls below the specified quorum during the meeting, any decision taken thereafter will not be valid.

E. Attendance

Whenever a Councillor expects to be away from the campus or be unavailable for a period of ten days or more, the Councillor shall notify the Speaker in writing, in advance. However, in cases of emergence, he or she should inform the Speaker in writing within five days of the commencement of his or her absence. If any Councillor fails to attend two consecutive meetings and/or a total of three meetings a semester without prior information and/or explanation, then the defaulter stands automatically.

F. Presence of an individual of the GSB in the RM

Any individual of the GSB can attend the RM
Any other person may attend the RM with the prior permission of the Speaker.

G. Presence of the EW in the RM

The Executives shall attend all the SAC meetings but may absent themselves with the prior permission of the Speaker. They will state the reasons to the Speaker in writing, who in turn will seek the approval of the SAC. In such an eventuality, the Executive should depute a member of the GSB (who is not a Councillor / EW member) to represent him or her on the floor of the SAC. The Executives shall be answerable to the GSB with regard to the non-attendance of SAC meetings. (Ref: Article 3 E of this chapter).

H. Presence of the Campus Press (CP) in the RM

The CP is free to attend any RM.
Note : An individual, a representative of a group of students, an Executive, a member of the CP or any other person who has been allowed to attend the RM, can put forth his/her views on the floor of the SAC with the prior permission of the Speaker.
I. Special Meeting (SM) of the SAC

a) No member of the GSB shall normally be permitted to attend the SM.
b) The Executive Wing and the Faculty Advisor are free to attend the SM.
c) The Speaker may exclude any person from the SM in case discussion pert to that person.

d) A simple majority of the SAC shall decide whether the concerned person other persons from the GSB may be permitted to attend the SM.

e) **SM convened in advance** – A simple majority of the floor strength of that shall decide whether the next meeting should be a SM.

f) **SM convened during an RM** – A simple majority of the floor strength of the shall decide whether the rest of a session should be a SM.

K. Misbehavior on the floor of the SAC

In the event of misbehavior by any member of the SAC, the EW, the GSB, the any other person during a session, the Speaker shall have the right to suspect person from that session.

L. Motions in the SAC Meetings

Any motion can be moved only with the permission of the Speaker.

a) Adjournment Motion

1. An adjournment motion may be moved by any member of the SAC which session is in progress.

2. The Speaker shall put the adjournment motion to vote immediately after proposal.

3. Adjournment motions shall be passed by a simple majority of the SAC.

b) Censure Motion

The censure motions shall be only in the context of the Councillors, the Speak EW, the CP and others accountable to the SAC.

1. A censure motion shall be submitted in writing to the Speaker at least two of advance.

2. In case the Speaker is the defendant, he or she shall vacate the chair and that shall chair the session. If the DS is the defendant, he shall vacate the chair Speaker shall appoint a Councillor to act as the DS for the session.

3. All censure motions shall be duly proposed in writing and shall be seconded east one Councillor in writing, this Councillor being other than the proposer.

4. A censure motion may be discussed in the absence of the defendant.

5. No censure motion shall be put to vote unless the defendant has been adequate opportunity to defend himself of herself before the SAC, and an added discussion has been had.

M. Overruling the decision of the Speaker.

Any decision of the Speaker can be overruled by a 2/3 majority of the floor aren the SAC.

N. Final session of the SAC

The final session of the SAC for a particular year shall be a joint session of the and the new SACs and EWs. The SAC and the EW completing their tenure through the Speaker present an account of the activities during their tenure, hand all records and charge, and shall suggest a future course of action to their success.

O. Tenure of the SAC

The term of office of the members of the SAC (including the Faulty Advisor), and the EW shall be one year. (Ref: Chap VII, 4 A d).

P. Representatives to the Board of Students

The student representatives of the Board of Students shall be all the members of the EW, the Speaker and two other students nominated by the GS.

Q. The Emergency Council (EC)

a) The EC shall be a sub-council of the SAC formed during the last meeting of the SAC before every vacation, to represent the SAC on issues which require immediate attention during the vacation.

b) The EC shall consist of:
- The Speaker / DS as convenor
- The GS or one other EW member nominated by the GS
- Five councillors representing diverse interests suggested by the Speaker and ratified by the SAC.

c) The EC is free to enlist the assistance of any students. However, these students shall have no vote in the SAC and shall not be accountable to the SAC for the action of the EC.

d) The EC shall consult the EW member concerned, regarding matters under the purview of a particular Executive.

e) The EC is not empowered to take decisions on far reaching policy matters. The EC shall gather information regarding all issues and forward its recommendations to the SAC. Such recommendations may or may not be ratified by the SAC.

f) The minutes of the EC meetings shall not be made public unless and until they have been ratified by the SAC.

g) The members of the EC should make themselves readily available so that an EC meeting can be convened at short notice.

R. Emergency Meeting (EM) of the SAC during vacation

The speaker is empowered to convene an EM of the SAC during the vacation giving three weeks notice, should the need for such a meeting arise, to discuss issues of far reaching importance.

S. Emergency Meeting of the SAC during a semester

The Speaker is empowered to convene and EM of the SAC during the semester giving short notice should the need for such a meeting arises, to discuss issues of far reaching importance.

CHAPTER VI
THE EXECUTIVE WING (EW)
1. Functions and Responsibilities
The members of the EW shall be responsible for the execution of the tasks entrusted to them and shall execute and implement the policies of the SAC. However, they shall function independently of one another and the SAC in the process of implementation and execution of these policies. They shall be accountable to the SAC for the satisfactory execution of their responsibilities.

2. Composition of the EW
The EW shall consist of:

A. The General Secretary
B. The Academic Affairs Secretary
C. The Research Affairs Secretary
D. The Hostel Affairs Secretary

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    E. The Sports Secretary
    F. The Cultural Affairs Secretary – Literary
    G. The Cultural Affairs Secretary – Arts
    H. The Co-curricular Affairs Secretary

3. Relation to the Councils

Every Executive shall have a Council to assist him or her. Any such Council/Committee shall normally consist of councillors to help the Executive and shall have the Executive as the Chairman. The members of such Council shall be nominated by the respective Executives as specified by the Constitution. However, the Executive alone remain accountable for the satisfactory performance of functions in their domain.

Note: Each Council/Committee shall have a quorum of half the total strength.

4. Formulation of Policies

The Executive along with the members of the Council/Committee under him or her can recommend policies regarding the matters under his or her purview. These policies, however, have to be ratified by the SAC to officially become the policy of the GSB.

5. The General Secretary (GS)

Functions and Responsibilities

(a) The Gs shall co-ordinate the work of the other Executives.

(b) The GS shall represent the GSB and shall handle matters in any area not under the purview of other Executives and shall liaise with the administration on all matters affecting the general student's welfare.

(c) The GS shall be involved in projecting the image of the students of IIT Madras to the public through the media.

(d) The GS shall be one of the student members of the hospital, transport, canteen, security and other such committees which may be formed for providing amenities to the students.

(e) The GS shall assist the Deans in organizing lectures of general interest.

(f) The GS shall look after the interests of the weaker sections of the students.

(g) The GS shall periodically report to the SAC regarding the functioning of the GSC.

General Secretary's Council (GSC)

a) Composition

The General Secretary's Council shall consist of :

1. 1 representative from SAC

2. 1 representative from the weaker sections of the students

3. 2 Representatives from the GSB

These names shall be proposed by the GS and ratified by the SAC

b) Functions and Responsibilities

1. The GSC shall advise the GS on various mattes pertaining to his or her domain and shall actively assist him or her in the performance of his or her duties,

2. The GSC shall meet at least twice a semester and the interval between two successive

meetings shall be at least 30 days.

3. An extraordinary meeting of the GSC for emergency situations can be called for by a signed requisition of at least of the GSC.

6. The Academic Affairs Secretary (AAS)

Functions and Responsibilities

a) The AAS shall effectively represent the views of the Student Body on academic matters, especially those related to academic courses.

b) The AAS shall help individual student tackle their specific academic problems and shall take up their problems with the respective authorities.

c) The AAS shall co-ordinate with the functioning of all the centralised facilities of an academic nature, such as the Library, the Computer Centre, the Placement Office, etc., and also with the RAS in a manner that addresses the needs of the Student Body.

d) The AAS shall convey any suggestions or grievances made by the SAC or the members of the GSB regarding matters of an academic nature to the respective authorities, and shall strive to see that action is taken on the above.

e) The AAS shall be conversant with all the academic rules of the Institute.

f) The AAS shall periodically report to the SAC regarding the functioning of the AAC.

Academic Affairs Council (AAC)

a) Composition : The AAC shall consist of :

· 1 representative from each branch of the BTech program

(i.e. all BTech Branch Councillors)

· 1 representative from the 1st year of the BTech program

· 1 representative from the MTech program

· 1 representative from the MSc program

a) All members of the AAC shall be SAC councillors.

b) The various official academic bodies of the Institute (Library Committee, etc.) shall contain the AAS (or any other member of the AAC nominated by the AAS and ratified by the SAC) as a student representative.

c) The interval between successive meetings of the AAS shall not exceed 30 days.

d) An extraordinary meeting of the AAC for emergency situations can be called for by a signed requisition of at least 4 members of the AAS.

e) The AAC shall advise and assist the AAS in members pertaining to his/her domain. However, its decisions are not binding on the AAS.

7. The Research Affairs Secretary RAS

A. Functions and Responsibilities

a) The RAS shall effectively represent the views of the research scholars on matters related to academic research.

b) The RAS shall address specific problems of the research scholars and shall take up these problems with the respective authorities.

c) The RAS shall co-ordinate with the functioning of all the centralised facilities of an

academic nature, such as the Library, the Computer Centre, the Placement Office, etc., and also with the AAS in a manner that addresses the needs of the Student Body.

d) The RAS shall convey any suggestions or grievances made by the SAC or the members of the GSB regarding matters pertaining to research to the respective authorities, and shall strive to see that action is taken on the above.

e) The RAS shall be conversant with all the academic rules of the Institute.

f) The RAS shall periodically report to the SAC regarding the functioning of the RAC.

B. Research Affairs Council (RAC)

a) Composition: The RAC shall consist of :

· 2 representatives from the MS program

· 2 representatives from the PhD (Engineering and Humanities) program

· 2 representatives from the PhD (Sciences) program

b) All members of the RAC shall be SAC councillors.

c) The various official academic bodies of the Institute (Library Committee, Placement Committee, Board of Academic Courses, Board of Academic Research, etc.) shall contain the RAS (or any other member of the RAC nominated by the RAS and ratified by the SAC) as a student representative.

d) The RAC will aid the RAS in addressing academic problems of common interest that arise in the course of research. They may also help in organizing workshops, seminars and newsletters pertaining to subjects of research interest.

e) The interval between successive meetings of the RAC shall not exceed 30 days.

f) An extraordinary meeting of the RAC for emergency situations can be called for by a signed requisition of at least 3 members of the RAC.

g) The RAC shall advise and assist the RAC in members pertaining to his/her domain. However, its decisions are not binding on the RAS

8. The Hostel Affairs Secretary (HAS)

A. Functions and Responsibilities

a) The HAS shall look after the issues regarding the maintenance of the hostels.

b) The HAS shall look after the common issues concerning the messes of all the hostels including the issues regarding the employees of the hostel management and other persons employed by the hostels.

c) The HAS shall assist in the running of the vacation messes.

d) The HAS shall be the principal representative of the Student Body to the Hostel Management and the Central Supplies Unit(CSU).

Note: Student Representatives to the Hostel Management

The 4 representatives to the Hostel Management shall be:

· The HAS

· The GS

· 2 other student members, one from the UGs and one from the PGs, both being Sac Councillors. These 2 student representatives will be ratified by SAC.

· The HAS shall look after all other issues regarding the hostels.

· The HAS shall periodically report to the SAC regarding the functioning of the HACs.

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B. Hostel Affairs Committees (HAC)

a) For issues concerning the centralized supply of commodities to the hostels, the HAS shall form a CSU Committee (CSUC) consisting of 3 SAC Councillors (1 PG and 2 UGs). The members of the CSUC shall be the student representatives to the Governing Council of the CSU.

b) The HAS shall form a Committee for the Maintenance of the Hostels (CMH) consisting of the General Secretaries of all hostels. The CMH shall look into the maintenance problems of all the hostels (Civil and Electrical) and the general cleanliness of all the hostels. The HAS shall select students from the CMH a representatives to the Maintenance Committee (Institute body).

c) The HAS shall form a Mess Committee (MC) consisting of the Mess Secretaries of all hostels. The MC shall look into the issues regarding the hostel messes, and shall assist the HAS in discharging his duties on such issues.

d) The HAS shall form a Garden Secretaries Council (GrSC) consisting of the Garden Secretaries of all hostels. The GrSC shall look into the issues common to all hostel gardens.

Note:

1. As members of the CMH, MC and GrSC are not nominated; ratification of the SAC is not needed in these cases.
2. The CMH, MC and GrSC shall meet at least twice a semester with an interval of at least 30 days between successive meetings.
3. Extraordinary meetings of the CMH, MC and GrSC for emergency situations can be called for by a signed requisition of at least 4 members of the respective Committees/Councils.

9. The Sports Secretary (SS)

A. Functions and Responsibilities

a) The SS shall look after the issues regarding the sports activities of the students.

b) The SS shall. With the assistance of the PTIs, be responsible for the following Matters:

1. Selection of Institute Teams
2. Coaching
3. Organizing inter-hostel and inter-collegiate matches.

c) The SS shall help the Institute Sports Advisor in maintaining an inventory of sports equipment and shall consult him or her on sports activities.

d) The SS shall prepare and present the statement of expenditure of special tournaments (eg. GFKR) to the respective CSAs and to the SAC.

e) The SS shall be solely responsible for the decision to change schedules of inter-hostel matches.

f) The SS shall responsible for the signing and submission of all bills and vouchers to the Sports Advisor.

g) The SS shall report periodically to the SAC regarding the functioning of the CSAs.

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II. Various Students Councils and Committees

B. Committees of Sports Activities (CSAs)

a) The CSAs shall assist the SS in discharging his or her duties.

b) The CSA –Institute will normally be responsible for Institute level activities.
The CSA – Inter-hostel will be responsible for the inter-hostel sports activities.

c) Composition of the CSAs

1. CSA – Institute:

· The SS
· The captains of the Institute teams
· The student secretaries of the various Sports Clubs. E.g. Tennis Club, Riding Club,
etc.
· The Sports Advisor
· The PTIs (invitees)

2. CSA-Inter-hostel

· The SS
· The Sports Secretaries of all hostels
· The Sports Advisor
· The PTIs (invitees)

d) The interval between 2 successive meetings of the CSA (Institute an Inter-host el)
shall not exceed 30 days.

e) The CSA-Institute shall apprise the Sports Advisor regarding the purchase of sports
equipment.

f) The accounts of all expenditure incurred in sports activities since a particular CSA-
Institute meeting shall be presented in the next CSA – Institute meeting.

C. Section of Captains and Club Secretaries

The selection of the Institute Team Captains and the various Club Secretaries for the
succeeding academic year shall be finalized in the final session of the CSA-Institute
during a particular academic year. The SS of the succeeding year shall be invited to
attend the meeting and his or her suggestions regarding selection shall be taken into
consideration.

D. Selection of Institute teams

The captains of the Institute teams, in consultation with the PTIs and Coaches, shall be
in charge of the selection of their respective teams. They will be required to give the
seedings for the inter-hostel matches in their respective events.

E. Duties of Club Secretaries

The Club Secretaries shall supervise the functioning of their respective clubs with the

help of the concerned PTIs and Coaches.

9. The Cultural Affairs Secretaries (CASs)

A. The Cultural Affairs Secretaries shall work together as a team.

B. Functions are Responsibilities

a) The specific events under the purview of each of the Cultural Affairs Secretaries are:

CAS – Lit : Debate, elocution, quizzes, writing events, dramatics, etc.

CAS – Arts : Music events, fine arts, photography, etc.

Other events not specifically mentioned above shall be divided among the CASs. The CASs shall resolve this issue among themselves.

b) The CASs, together with the Cultural Advisor and other members of the faculty, shall organize Saarang, the annual cultural festival of the Institute, and Bharat Utsav, a festival based on Indian culture.

c) The CASs shall together be responsible for the organisation and conduct of inter-hostel cultural events, which shall decide the winner of the Lit-Soc Trophy.

d) The CASs shall present the annual budget for cultural affairs to the SAC for its ratification.

e) The CASs shall nominate co-ordinators for their respective events, and for the organisation of other cultural events, and the names of these co-ordinators shall be made public. These nominations need not be ratified by SAC.

f) The CASs shall together decide all issues concerning internal and external cultural events.

C. Literary Council (LC)

a) The LC shall consist of the Hostel Literary Secretaries ad the co-ordinators of various literary events. The Cultural Advisor shall be an ex-officio member.

b) The LC shall assist the CAS –Lit in discharging his or her duties.

c) The LC shall decide all issues pertaining to the various inter-hostel literary events.

d) The LC shall meet at least 3 times during a semester. These meetings shall be spread evenly.

D. Arts Council (AC)

a) The AC shall consist of the Hostel Arts Secretaries and the co-ordinators of various arts events. The Cultural Advisor shall be an ex-officio member.

b) The AC shall assist the CAS – Arts in discharging his or her duties.

c) The AC shall decide all issues pertaining to the various inter-hostel literary events.

d) The AC shall meet at least 3 times during a semester. These meetings shall be spread evenly.

E. The audited accounts for the expenditure incurred due to special cultural activities (e.g. Saarang) shall be presented by the CASs (old and or/new) to their respective Councils and to the SAC (old and /or new).

10. Every Executive shall make a report of his or her activities for the semester and submit it to the Speaker, SAC when called for. (Ref: Chap III, 4 A (b), 9)

CHAPTER V

HOSTEL COUNCILS

1. The general body of the hostel shall, in conformity with the decisions of the Hostel Management, decide policies with respect to their own hostel. The Hostel Council (HC) shall be responsible for taking decisions consistent with the policy set by the general body of the hostel, and their implementation. The Hostel Council shall be in continuous touch with the general body of their hostel. The Hostel Council shall apprise the general body of their hostel, of issues of interest to the hostel.

2. Composition of the HC

- Warden (Chairman) || Ex-officio
- Assistant Warden (s) || members
- General Secretary
- Mess Secretary
- Sports Secretary
- Literary Secretary
- Social (Arts) Secretary
- Garden Secretary
-Technical Affairs Secretary
Alumni Affairs Secretary

Student Amenities Centre Secretary.

3. General Secretary (GSec)

A. The GSec shall act as the Secretary of the HC and shall record and circulate within the hostel, the minutes of every HC meeting.
B. The GSec shall ensure the proper maintenance of the hostel and its precints.
C. The GSec shall co-ordinate the activities of the other Hostel Secretaries.
D. The GSec shall convene the Hostel General Body Meeting as and when required.
E. The GSec shall help and Assistant Warden and /or the Warden in keeping an account of procuring or condemning of hostel furniture.
F. The GSec shall be responsible for the conduct of all hostel celebrations.
G. The GSec shall ensure adequate security provision for the hostel.
H. The GSec shall be representing the views of the hostels in the SAC.
I. The GSec shall represent the views of the hostel in the SAC.

Note: If the GSec in disqualified or impeached from SAC, the HC to which he or she belongs shall nominate another member of the HC to represent the hostel in the SAC.

4. Mess Secretary (Mess Sec)

A. The Mess Sec shall ensure that food of proper quality is provided at reasonable rates to the inmates.
B. The Mess Sec shall ensure the proper maintenance of all equipment, utensils and

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furniture of the mess.

    C. The Mess Sec shall ensure the cleanliness of the mess.

    D. The Mess Sec shall strive to ensure the repair/replacement of all damaged equipment, utensils and furniture of the mess.

    E. The Mess Sec shall form a Hostel Mess Committee.

    F. The Hostel Mess Committee (HMC)

1. The HMC may be either elected or nominated.

2. The membership, excluding the Mess Sec shall be between 4 and 6.

3. The HMC shall assist the Mess Sec in the discharge of his duties.

5. Sports Secretary (SSec)

A. The SSec shall be responsible for the procurement of sports equipment for use by the hostel residents.

B. The SSec shall appoint the various hostel team captains.

C. The SSec shall be responsible for the conduct of various intra and inter-hostel sports tournament.

6. Literary Secretary (Lit Sec)

A. The Lit Sec shall be responsible for the conduct of the various literary activities of the hostel. He or she shall also conduct the arts activities of the hostel in co-ordination with the Soc Sec of the hostel.

B. The Lit Sec shall be responsible for the procurement and proper upkeep of books meant for the hostel library.

7. Social (Arts) Secretary (Soc Sec)

A. The Soc Sec shall be responsible for the conduct of the various arts activities of the hostel, in co-ordination with the Lit Sec of the hostel.

B. The Soc shall strive towards the repair/replacement of faulty audio/video equipment.

C. The Soc Sec shall be responsible for the procurement of records and cassettes for entertainment.

D. The Soc Sec shall be responsible for the procurement of magazines and newspapers for the hostel common room.

E. The Soc Sec shall be responsible for the procurement and proper upkeep of musical instruments for use by the residents.

8. Garden Secretary

The Garden Secretary shall be responsible for the proper upkeep the hostel garden(s).

9. Student Amenities Centers Secretary (Sac Sec)

A. The Sac Sec shall be responsible for the procurement of consumer goods (i.e. toiletry, stationery, etc.) for the students.

B. The Sac Sec shall be responsible for maintaining proper accounts of the stores and a proper inventory of the items in the stores.

10. The General Body Meeting (GBMs)

A. There shall at least one GBM convened by the GSec every semester.

B. There shall be one special GBM to pass the budget allocations obtained out of Establishment 'B' funds. The general policies of the hostel shall also be formed during the GBM.

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C. The quorum for any GBM shall be 25 percent of the total current strength of the residents of the hostel.

D. An extraordinary GBM shall be called if 25 percent of the residents sign a requisition for the same. The GBM shall be held within 72 hours of the requisition.

E. All the Secretaries shall attend the GBMs. In the case of his or her absence, a Secretary shall depute another resident of the hostel.

F. The minutes of all GBMs shall be communicated to the hostel residents within 72 hours of holding the GBM.

11. The Hostel General Secretaries will present a brief report about their hostel activities and future plans twice a year, when called for by the Speaker, SAC (Ref: Chap III, 4(b), 9).

CHAPTER VI

CAMPUS PUBLICATIONS AND FILM CLUB

1. Campus Publications (Students)- CP

Note : All Publications /Press mentioned in this Constitution refer only to the Campus Publications (Students).

A. Introduction

a) There are 3 campus publications - Focus, Campus times and Spectator. Focus shall highlight academic or non-academic issues and shall provide feedback to the Campus community. Campus times shall publish articles of literary, scientific or technical nature and articles of popular interest as well. Spectator shall report on campus sports and cultural activities.

Any other campus publication may be started only after obtaining the prior approval of the SAC.

CHAPTER VII

ELECTIONS, IMPEACHMENT AND REFERENDUM

1. A. The elections for the following posts shall normally be held and completed on or before the third Monday on March of every academic year. The new representatives shall take over after 14 days and within 21 days of completion of the following elections and the Dean – Students shall send a notice to all concerned regarding the take-over.

a) Branch Councillors from each branch of B Tech

b) Day Scholars Councillor

c) Class Councillors from M Tech

d) Class Councillors from II MSc

e) Class Councillors from the MS and PhD programs

f) All Hostel Councils –except those of PG hostels

Note : 1. The SAC Councillors for a given year of BTech. and MSc will be elected from and by the students who are currently in their previous years.

2. The Councillors elected above (a to e, and all Hostel General Secretaries)

g) The General Secretary

h) The Academic Affairs Secretary

c) The Research Affairs Secretary
d) The Sports Secretary
e) The Cultural Affairs Secretaries
f) All members of the Hostel Council

4. Qualifications and Electorate

A. The following qualifications hold for all posts:

a) Any person can contest for a particular post if and only if he or she is a member of the electorate for that post.

b) No person shall contest for more than one post concurrently.

c) No person can resign from a post to which he or she was elected and contest for another post in the same year.

d. The candidate should stay as a student for whole one year for which he or she has been elected (Note: this qualification does not apply to the II MTech Branch Councillor)

e) For BTech. MTech and MSc student the candidate must have a minimum CGPA of 6.0 out of 10. The aspirants should have completed credits at the average rate specified by the Senate, so as to complete the course in 8, 3 or 4 semesters respectively, as the case may be.

g) For MS and PhD research scholars. The aspirant should have cleared satisfactorily all the subjects for which he or she has registered for, and should have received the scholarship amount uninterruptedly as evidence of having maintained satisfactory progress in research.

h) In case of sponsored candidates, permission of the sponsoring agency must be obtained for contesting any post.

B) For the posts of the Hostel Council The following will be eligible to contest:

1. All UG students resident in the hostel

2. All PG students resident in the hostel and who will not absent themselves for more than one month at a stretch during the vacation.

3. Note: These candidates must. In addition, satisfy all requirements mentioned in 4A above.

C) The electorates for the various posts shall be as mentioned below:

a) Speaker SAC : The elected members of the SAC
b) The General Secretary : The GSB
c) The Academic Affairs Secretary : Students of Btech, Mtech and MSc only
d) The Research Affairs Secretary Students of MS and PhD only
e) The Hostel Affairs Secretary : The GSB
f) The Sports Secretary : The GSB

h) The Hostel Council : All residents who are not salaried employees of Institute who have a right to stay in the hostel, and who expect to have a minimum period of residence in the hostel of 2 academic semesters.

g) SAC Councillors : The members of the respective constituencies from which the SAC Councillor has contested. Note: If the General Secretary of Saraye is a UG, then an election for the post of the Hostel Councillor will be held only among the PGs. Similarly, if the General Secretary is a PG, then an election to the above post shall be

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i) The Research Affairs Secretary
j) The Hostel Affairs Secretary
k) The Sports Secretary
l) The Cultural Affairs Secretary – Literary
m) The Cultural Affairs Secretary – Arts

B. The election of the Speaker, SAC shall be held within 20 days of the election of the above posts. The SAC Councillors elected above (a to e, and all Hostel General Secretaries) shall elect the Speaker.

C. The election for the following remaining posts of the new SAC shall normally be held and completed within the first 6 weeks of the reopening of the Institute after the summer vacation.

1. Class Councillors form I BTech
2. Class Councillors from I MTech
3. Class Councillors from I MSc
4. Sarayu Hostel Councillor

D. If Nominations for a given post are not received when called for in February of a year, fresh nominations shall be called for, for the same posts when elections are held after the reopening of the Institute after the summer vacation. If even at this time nominations are not received, the post shall remain vacant for the entire year.

2. The Mode Voting

A. Ordinary System of Voting

Each voter gets one for a particular post and each cast it favour of any one candidate. The candidate obtaining the highest number of votes shall be considered elected.

B. Preferential System of Voting

Each voter shall have as many preferences as there are number of posts. Each first, second and third preference vote shall carry 10.5 and 3 points respectively. A voter must cast all the preferences to validate the vote. The counting procedure for the preferential voting system is as follows. The total points obtained by each candidate secures. The candidates shall be grouped according to their constituencies. The candidates from each constituency shall be ranked according to the descending order of the total points obtained by them. The candidates shall then be declared elected from the top of the ranking order until all the posts in that constituency are filled.

3. Electoral Categories

A. The following categories of SAC shall be elected by the ordinary system of voting, since only a single person may be elected to these posts:

a. I BTech Class Councillors
b. I and II MTech Class Councillors
c. PhD – Engineering and PhD – Sciences Class Councillors

C. Others Categories

The following shall be elected by the ordinary system of voting:

a) The General Secretary
b) The Co-curricular Affairs Secretary

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held only among the UGs.

5. The Election Officer (EO)

A. Appointment

The Election Officer shall be appointed by the Dean-Students. He or she shall be a faculty member.

B. Duties and Responsibilities

a) The EO shall be responsible for the conduct of all elections prescribed in this Constitution.

b) The EO shall ensure fair and free elections.

c) The EO shall announce the dates and times for the following:

1. Filling of nominations
2. Withdrawal of nominations
3. Complaints regarding nominations.
4. Elections
5. Complaints regarding elections.

d) The EO shall specify campaign restrictions.

e) The EO shall specify proceedings for filing and withdrawal of nominations.

f) The EO shall announce the list of valid nominations and the results of the elections to the GSB.

C. A Deputy Election Officer shall be appointed from among the faculty by the Dean-Students. The Deputy Election Officer shall assist the EO and shall take over the Eos duties in the event of the Eos absence.

D. The EO shall be free to enlist the help of any persons other than the candidates or their representatives to conduct of the Eos business.

E. Grievances Committee (GC)

The GC shall consist of the Dean-Students, the EO, the Speaker of the existing S.AC and a member nominated by the SAC. It shall look into all the complaints regarding the conduct of the elections and take appropriate decisions. The decisions of this Committee shall be final.

Note: In the case of the Hostel Council elections, the Warden of the hostel shall be the EO.

6. Restrictions regarding campaign

A. The following restrictions apply to the posts of the GS, AAS, RAS, HAS SS, CASs and the Hostel Council:

1. No PA system shall be used for campaigning.
2. The candidates shall not provide any form of transport to the voters.
3. Only posters specified ad and approved by the EO will be permitted. No candidate shall print or make in any other fashion his or her campaign posters.
4. The posters shall be displayed only at locations pre-specified by the EO.
5. No hand bills or banners shall be permitted.
6. No defacing of Institute property by way drawing or writing or otherwise shall be permitted.

7. The campaigning shall end 24 hours before the election.

Note: a) The nominee of any candidate found violating the above rules shall be cancelled.
b) A special election bulletin shall be brought out by the Dean-Students giving equal opportunities for all the candidates to project their plans explicitly.
c) Opportunity will be provided for candidates standing for the GS, AAS, RAS, HAS, SS and CASs to present on a common platform, their program of action.
B. All the above rules except (3) and (4) apply to the posts of the Speaker, SAC and the other SAC Councillors. In these cases no posters of any kind shall be allowed.

7. Election Procedure

A. Minimum intervals
a) Between announcement of the date of election and the last date for filing nominations shall be 5 days.
b) Between the last date for filing of nominations and the last date for withdrawal of nominations shall be 2 days.
c) Between announcement of valid nominations and complaints regarding nominations shall be 2 days.
d) Between the last date for complaints regarding nominations and the date of election shall be 5 days.

B. Announcement of valid nominations

a. For a nomination to be valid, the proposer and seconder must be from the electorate which votes for the particular post.
b. The list of candidates whose nominations are valid shall be announced within 24 hours of the end of time given for the withdrawal of nominations.

C. Polling Officers
a) Appointment: the EO will nominate the Polling (Pos) in consultation with the Dean-Students to conduct the elections in the booth.

b) Duties and Responsibilities:
1. The Pos shall collect the sealed and empty ballot boxes and the list of voters in their respective booths from the EO and take to their pre-assigned polling booths.
2. They shall ensure free and fair elections in their respective polling booths.
3. They shall allow only one representative of each candidate to stay within the polling booth during the polling.
4. They shall take the sealed ballot boxes and deposit them with the EO immediately after the polling is over.
5. They shall assist in the counting of votes.
6. They shall assist the EO when called for, in the conduct of a computerized system of election.

D. Counting of votes
a) A candidate has the right to be present during the counting of votes. If he or she cannot be present. He or she may nominate a representative to be present during the counting.

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b) The counting of votes shall commence as soon as the polling is completed for all the posts.

c) The contestants shall be bound by the written and signed statement and actions of the persons authorized by them to be their representatives during the counting.

E. Results

The list of successful candidates shall be officially announced by the EO as soon as the counting is over, a notice regarding the same shall be bought out by him or her within 24 hours to reach the GSB.

F. Complaints

1. All complaints regarding the election should be submitted to the Grievances Committee (GC) within 24 hours of the declaration of the results.

2. The GC shall take any action it deems fit as regards the complaints received by it.

3. The GC shall be answerable to the SAC for actions taken by it regarding the complaints.

Note: If the complaints are against the EO, between the announcement of the final list of nominations and the date of the election, all the candidates for the concerned posts shall meet the EO and another person nominated by the Dean-Students.

G. Tie

At a time specified by the EO between the announcement of the final list of nominations and the date of the election, all the candidates for the concerned posts shall meet the EO and state their consensus regarding the method to be adopted for resolving a tie in writing. If no consensus is received by the EO during the time specified, the EO shall decide on a method which is equally fair to all candidates for the resolution on a tie.

8. Re-elections

A. Speaker, Deputy Speaker of the SAC

a) If the Speaker or the DS of the SAC resigns or is impeached, and hence or otherwise the post falls vacant, a new Speaker/DS shall be elected/appointed in the next session of the SAC.

b) If the Speaker's post falls vacant, the DS shall discharge the duties of the Speaker in the intervening period. He or she shall co-ordinate the election of the new Speaker by the intervening of the SAC.

c) If the post of the DS falls vacant the Speaker shall appoint a Councillor as DS.

d) If both the Speaker and the DS vacate their posts concurrently due to any reason whatsoever, then one of the members of the EW (decided by a consensus of the EW) shall immediately:

· Function as the Speaker until a new Speaker is elected in the next session of the SAC, and

· Nominate any member of the SAC to function as the DS until a new DS is appointed in the next session of the SAC

B. Members of the EW

If any of the members of the EW resigns or is impeached, and hence or otherwise the post falls vacant o or before 1st November, re-election for the same post shall be held and completed as per the procedure mentioned in Articles 5,6 and 7 of this chapter.

After November 1st the Dean –Students shall nominate a member to the vacant post in

consultation with the other member of the EW and the Speaker, SAC.

C. SAC Councillors

a) Re-election to any Councillor's post, after the SAC has attained the full possible strength, shall be held only if the strength of the SAC falls below 35, or if all posts in any one constituency become vacant within 20 days of such an event.

b) The Speaker shall call for nominations from the respective electorate and shall conduct the election.

c) If the Hostel General Secretary resigns or is impeached from SAC, there shall be no re-election. (Ref: Chap V, 31).

D. Members of the Hostel Council

a) The Warden shall call for nominations for any post falling vacant in the HC.

b) The Warden shall conduct the election within a fortnight of the day on which the post falls vacant.

c) In case of a dispute concerning the hostel elections, the matter will be referred to the GC referred to in Article 5E of this chapter. The Chairman, Council of Wardens (CCW) and the General Secretary will be co-opted into the GC, provided the CCW is not the Warden of the concerned hostel.

E. Faculty Advisor

The Dean – Students shall nominate a new Faculty Advisor from a panel on names suggested by SAC.

9. Impeachment

A. Initiation

Any impeachment proceedings can be initiated by either 12 members of the SAC or ¼ of the total strength of the electorate for a particular post.

Note: Only ¼ of the total strength of the hostel can initiate impeachment proceedings against a member of the HC.

B. Procedure

a) The Speaker shall conduct the impeachment proceedings against any Councillors, members of the EW, or the DS within 1 week of the receipt of the memorandum.

Note: In the case of the HC members, the Warden shall conduct impeachment proceedings within 1 week of receipt of the request for impeachment.

b) Debate: The Speaker/Warden shall call for a meeting of the electorate within 48 hours of the receipt of a valid impeachment notice. Opportunities will be given for the representatives of the signatories of the impeachment as well as the person against whom the impeachment is initiated to present their sides of the case.

c) If an impeachment is initiated against the Speaker, the DS shall conduct the impeachment proceedings within 1 week of the receipt of request for impeachment.

C. A person shall be considered impeached' if any only if 2/3 of the respective electorate cast their votes and a simple majority of these vote in favour of the impeachment.

D. For impeachment of student members of the Senate Sub-Committees and the Institute Standing Committees. The electorate shall be the SAC.

E. For impeachment of editors of the Editorial Boards of the CP, the electorate shall be the GSB.

10. Referendum

A. a) Initiation: A referendum shall be initiated by the Speaker only if more than ½ the

total strength of SAC or more than 1/5 the total strength of the GSB asks for it through a signed memorandum addressed to the Speaker.

b) Procedure: The be considered a referendum with 48 hours of receipt of the memorandum.

c) A referendum shall be considered valid if and only if more than 1/3 of the total GSB cast their vote and a motion shall be considered as passed only if a simple majority of these vote in favour of the motion.

B. Referendum for hostels

a) A referendum shall be initiated by the Warden only if more than ¾ of the total strength of the hostel asks for it through a signed memorandum addressed to the Speaker.

b) Procedure: The Speaker shall conduct a referendum within 48 hours of receipt of hours of receipt of the memorandum.

c) A referendum shall be considered valid if and only if more than 1/3 of the total GSB cast their vote and a motion shall be considered as passed only if a simple majority of these vote in favour of the motion.

B. Referendum for hostels

a) A referendum shall be initiated by the Warden only if more than ¾ of the total strength of the hostel asks for it through a signed memorandum addressed to the Warden.

b) The Warden shall conduct a referendum within 48 hours of receipt of the memorandum.

c) A referendum shall be considered valid if and only if more than 2/3 of the total strength of the hostel cast their vote, and a motion shall be accepted as passed by the Warden only if a simple majority votes in favour of the motion.

CHAPTER VIII

AMENDMENTS TO THE CONSTITUTION

1. A. There shall be no amendments to any particular clause of the Constitution for 2 years from the date of its approval in the Senate.

B. Amendments after this period

a) Initiated by the GSB: An amendment to any clause of this Constitution can be initiated if more than 1/5 of the total strength of the GSB seeks it through a signed memorandum addressed to the Speaker.

b) Initiated by the SAC: An amendment to any clause of this Constitution can be initiated if more than half the total strength of SAC seeks it through a signed memorandum addressed to the Speaker.

c) Initiated by a Senate member: A Senate member who wishes to amend any clause of this Constitution shall put forward his proposal to the Dean-Student in writing. The Dean-Students shall forward the proposal to the Speaker, SAC. The procedure will then be as laid down Articles 1 B(b), 2 D, and 4 of this chapter.

2. Amendment Procedure

A. The Speaker shall inform the GSB of the amendment within 48 hours of the receipt of the signed memorandum, and shall request the GSB to give their opinions/suggestions, if any, on the proposed amendment within 2 weeks.

B. The Speaker shall convene a RM of the SAC within 3 weeks of the date of receipt of

the signed memorandum, in order to discuss the proposed amendment.

a) In the case of a memorandum initiated by the GSB, the Speaker shall conduct a referendum within 7 days of the discussion on the proposed amendment, after stating the final version(s) of the amendment to the GSB.

b) The referendum shall be considered valid if and only if at least 1/3 of the GSB vote on it.

c) The proposed amendment shall be put forward to the Senate only if a simple majority votes in favour of it.

D. a) If the memorandum seeking amendment is initiated from initiated from within the SAC, the proposed amendment will be put to vote in SAC at the end the RM. (Ref: Clause 2B above).

b) The vote shall be considered valid only if at least 2/3 of the total current strength of SAC votes on the proposal.

c) The proposed amendment shall be treated as passed only if at least 2/3 of the votes are in favour of the amendment.

d) The Speaker shall make known to the GSB the final decision of the SAC on the proposed amendment within 48 hours.

e) If at least 50 members of the GSB make a signed request to the Speaker within 15 days of the announcement of the decision to reconsider the decision, the Speaker shall convene a RM for this purpose. (Ref: Chap III, § C i). Such a request for reconsideration will be entertained only once by the Speaker.

E. If the request for amendment is initiated by both the GSB and the SAC, the procedure laid out in Clause 2C above will be followed.

3. Amendments to this chapter (Chapter VIII) of the Constitution can only be made on a signed requisition initiated by the GSB. (vide Clause 1 B(a) above)

4. NOTE TO STUDENTS

Notwithstanding any of the provisions of any of the above clauses of this Chapter, amendments to this Constitution shall come into force only after the Institute Senate approves the amendments.

12th MEETING OF

SENATE

APPENDIX TO ITEM- 12.15

NATIONAL INSTITUTE OF TECHNOLOGY

KURUKSHETRA

DUE DATE OF MEETING: 19th JANUARY, 2009

MECHANICAL ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA – 136 119

No.MED/09/36

Dated 12.01.2009

With reference to our letter No. MED/08/1141 dated 31.12.2008 regarding the revision of B. Tech 7th & 8th Semester IEM Scheme and Syllabi. Due to shortage of time the same has been passed by BOS from Mechanical Department by circulation (Copy enclosed).

Chairman

Dr. Ashwani Jain,
Prof-I/c- (Academic Affairs)

DEPARTMENT OF MECHANICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

No. MED/2008/ 114/

Dated: 30.12.2008

With reference to your letter No.Acad./Senate 12th/2009 dated 26.12.2008 regarding the Agenda-item of Senate meeting to be held on January'19, 2009. The Agenda is as follows:

1. Modification of scheme according to syllabi of B.Tech-IEM 7th & 8th Semester w.e.f. session 2009-10.
   The copy of old scheme & new scheme is enclosed for the consideration by the senate.

2. In SCSA meting held on 19.12.08 regarding the new scheme of 1st year to be implemented was discussed. It was felt by the Deptt. of Mechanical & IEM that Engineering Drawing was being taught by the Mechanical Deptt. only at the time of B.Sc. Engg. five year degree course, it was shared by Mech & Civil Engg. Deptts with a ratio of 2:1. Now in the new proposed scheme, Engg. Drawing-II of six periods has totally eliminated and only three periods of Engg. Drawing has been allotted to Civil Engg. Deptt. The Mech. Deptt. is of the opinion that Engg. Drawing-II should be retained or if only one course of Drawing is to be taught to the 1st year than 2/3 load of Engg. Drawing should be given to Mechanical Deptt., and 1/3 load to Civil Deptt.

The senate may consider and approve.

SCHEME OF

B.TECH. (7th AND 8th SEMESTER)
INDUSTRIAL ENGINEERING AND MANAGEMENT

OLD SCHEME

SCHEME OF EXAMINATION

B. TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT

S. No	Course No	Subjects	Teaching Schedule (Hours)				Credits	Duration of Exam. (Hours)
			L	T	P/D	Total		
1	IEM-401	Network and project management	4	1	-	5	4.5	3
2	IEM-403	CAD C+M	4	1	-	5	4.5	3
3	IEM-405	Strategic entrepreneurship	4	1	-	5	4.5	3
4	IEM-	Elective II (I)	4	1	-	5	4.5	3
5	IEM-	Open Elective I*	3	1	-	5	4.5	3
6	IEM-408	CAD/CAM (Practical)	-	-	2	2	1.0	3
7	IEM-410	Project I	-	-	6	6	4.3	-
8	IEM-411	Seminar-I	-	-	2	2	1.0	3
9	IEM-412	Practical Training Report	-	-	-	-	3.0	3
		Total	20	5	10	35	33.0	

* The Open Electives will be offered from the list of Open Electives.
@ The Elective II will be offered from the list of Electives.

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SCHEME OF EXAMINATION

B. TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT

S. No	Course No	Subjects	Teaching Schedule (Hours)				Credits	Duration of Exam. (Hours)
			L	T	P/D	Total		
1	IEM-402	Industrial inspection and non-destructive testing	3	1	-	4	3.5	3
2	IEM-404	Maintenance and reliability engineering	3	1	-	4	3.5	3
3	IEM-406	Total quality management	4	1	-	5	4.5	3
4	IEM-	Elective III*	4	1	-	5	4.5	3
5	IEM-	Open elective§	3	1	-	4	3.5	3
6	IEM-410	Non-destructive testing (Practical)	-	-	2	2	1.0	3
7	IEM-412	Project-I	-	-	9	9	12.0	3
8	IEM-411	Seminar-II	-	-	3	3	1.0	3
9	IEM-414	Comprehensive Viva-Voce	-	-	-	-	3.0	3
10	IEM-416	General Fitness and Professional Aptitude (Viva-Voce)	-	-	-	-	3.0	3
		Total	17	5	13	35	39.5	

* The Electives will be offered from the list of Electives.
§ the electives offered by other departments to the students of IE&M.

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SCHEME OF EXAMINATION

B. TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT

Sr. No.	Course No.	Subjects	Teaching Schedule (Hours)				Credits	Duration of Exams. (Hours)
			L	T	P/D	Total		
1	IEM-401	Network and Project management	3	1	-	4	3.5	3
2	IEM-403	Computer Aided Design and Manufacturing	3	1	-	4	3.5	3
3	IEM-405	Product Design & Development	3	1	-	4	3.5	3
4	IEM-	Elective II*	3	1	-	4	3.5	3
5	IEM-	Open Elective I**	3	1	-	4	3.5	3
6	IEM-407	CAD/CAM (Practical)	-	-	3	3	1.5	3
7	IEM-409	PRIDE Lab	-	-	3	3	1.5	3
8	IEM-411	Minor Project	-	-	9	9	4.5	3
9	IEM-413	Practical Training Report	-	-	-	-	3.0	3
		Total	15	5	15	35	28.0	

* The Elective II will be offered from the list of Electives

** The Open Elective I will be offered from the list of Open Electives.

SCHEME OF EXAMINATION

B. TECH. (8ᵗʰ SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT

Sr. No.	Course No.	Subjects	Teaching Schedule (Hours)				Credits	Duration of Exams (Hours)
			L	T	P/D	Total		
1	IEM 402	Industrial Inspection and Non destructive Testing	3	1	-	4	3.5	3
2	IEM 404	Maintenance and Reliability Engineering	3	1	-	4	3.5	3
3	IEM 406	Experimental Design Techniques	3	1	-	4	3.5	3
4	IEM *	Elective III*	3	1	-	4	3.5	3
5	IEM.	Open Elective III**	3	1	-	4	3.5	3
6	IEM 408	NDT Lab	-	-	2	2	1.0	3
7	IEM 410	Optimization Lab	-	-	2	2	1.0	3
8	IEM 412	Major Project	-	-	9	9	9.0	3
9	IEM 414	Seminar-II	-	-	2	2	1.0	3
10	IEM 416	Comprehensive Viva-Voce	-	-	-	-	3.0	3
11	IEM 418	General Fitness and Professional Aptitude (Viva-Voce)	-	-	-	-	3.5	3
		Total	15	5	15	35	36.0	

* The Elective III will be offered from the list of Electives

** The Open Elective III will be offered from the list of Open Electives

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- 401 NETWORK AND PROJECT MANAGEMENT

L	T	P/D	Cr
3	1	-	3.5

Network Analysis: Commitment, Duration estimating, CPM, PERT, Their comparisons. Calculation of project duration. Optimizing the plan.
(5 hrs)

Introduction to Project Management: The need for project management. Project management terminology. Project constraints. Key objectives of project management. People issues in project management. Achieving low stress project management.
(5 hrs)

Leadership and Motivation: Project managers as leaders. Motivation methods for self and others. Artful influence. Effective delegation. Accountability. Authority and autonomy.
(5 hrs)

Communication and Teams: Meeting project communication needs. Matching communication styles. Understanding communication process. Reasons for ineffectiveness. Gaining access for communication. Ensuring appreciation. Recognizing the needs for teams. Identifying elements for successful teams. Constructing team.
(5 hrs)

Scheduling: Work breakdown structures. Precedence relationships. Scheduling tools.
(5 hrs)

Resource Management: The human resource- the human resource challenge today. Cost of human resource. The capital resource- elements of cost. Duration and cost. Managing the resource profile- profile management tools. Resource leveling methods. The final plan.
(5 hrs)

Project Control: Project control- purpose of project control. Detecting problems. Solving problems. Getting back on track. Approaches to project control. Project control process. Example- resolving a project team
(5 hrs)

Project Control Techniques: Periodic control techniques. Preventive control techniques. Cost control.
(5 hrs)

Books Recommended
1. Practical Project Management by Ghattas and Mckee. Pearson Education Asia.
2. Production and Operations Management by S.N.Chary. TMH Publishing House.

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- 403 COMPUTER AIDED DESIGN AND MANUFACTURING

L	T	P/D	Cr
3	1	-	3.5

Introduction: Introduction to CAD, CAM, Computer integrated manufacturing system. Computer aided process planning and group technology. Basics of geometric and solid modeling. Explicit, Implicit, Intrinsic and parametric equations.

(4 hrs.)

Transformations: Introduction, Transformation of points and line, 2-D rotation, Reflection, Scaling and combined transformation, Homogeneous coordinates, 3-D scaling, Shearing, Rotation, Reflection and translation, Combined transformations, Orthographic and perspective projections.

(6 hrs.)

Curves: Algebraic and geometric forms, Straight lines, Circles, Conics, Hermite curve, Bezier curves and B-spline curves.

(6 hrs.)

Surfaces: Algebraic and geometric forms, Tangents and twist vectors, Normal, plane surface, Ruled surface, Surface of revolution, Tabulated cylinder, Bi-cubic hermite surface, Bezier surface, B-spline surfaces.

(6 hrs.)

Solids: Solid models and representation scheme, Fundamentals of Solid Modeling, Boundary representation, Constructive solid geometry.

(6 hrs.)

Numerical Control: Introduction, Basic components of an NC system, The NC procedure, ND coordinate system, NC motion control systems, Applications of numerical control, Introduction to CNC, DNC and adaptive control manufacturing systems.

(6 hrs.)

NC part programming: Introduction, Tape coding and format (NC tape coding, formation of instructions, NC words), Manual part programming, Computer assisted part programming.

(6 hrs.)

Reference and Text Books:

1. CAD/CAM: By Groover and Zimmer, Prentice Hall
2. CAD/CAM : Theory and Practice - By I. Zeid, Tata McGraw Hill
3. Mathematical Elements for Computer Graphics: By Rogers & Adams, McGraw Hill.

B.TECH. (7ᵗʰ SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-405 PRODUCT DESIGN AND DEVELOPMENT

L	T	P/D	Cr
3	1	-	3.5

Introduction: Definitions, What is industrial design, Assessing the need for ID, Product and process cycles, Ethics, Societal and economic considerations in engineering, Technological forecasting, Technological innovation and design process. (4 Hrs)

Design Process: Importance of product design, Considerations of a good design, Detailed descriptions of design process, Role of marketing, Organization for design and role of computers in design. (4 Hrs)

Concept generation & concept selection: Concept generation process, Basic methods, Information gathering and brain storming, Conventional aids, brain ball, C-Sketch/6-3-5 method: advanced methods: Direct search, Systematic search with physical principles and classifying schemes: Morphological analysis, Factors that determine effective decision making, Estimating technical feasibility, Concept selection process- basic and advanced methods. (4 Hrs)

Product Modeling: Model preparation & selection method, Construction of product models, Physical models/ prototypes, Types of prototypes, Uses of prototypes, Rapid prototyping techniques, Dimensional analysis, Similitude and scale models, Geometrical modeling on the computer, Computer visualization. (6 Hrs)

Design for Robustness: Quality design theory, General robust design model, Robust design model construction, Taguchi's method: noise variable matrix, Design variable matrix, Experimental matrix, Signal to noise ratio, Selection of target design, Optimization methods, Evaluation considerations in optimization, Design optimization. (6 Hrs)

Design for manufacturing and assembly: Estimation of manufacturing costs, Reducing the cost of components and assemblies, Design for assembly, Design for piece part production, Cost driver modeling and manufacturing cost analysis. (4 Hrs)

Economic decision-making: Economic Equivalence, Decision making preliminaries, Opportunity definition, Break-Even analysis, Applications of break-even Analysis, Make or buy decision, Deterministic evaluation, Payback period, Annual equivalent, ARR, NPV and IRR methods, Depreciation, benefits - cost analysis, Replacement analysis, Decision tree analysis. (6 Hrs)

Cost evaluation: Categories of cost, cost indexes, Estimation of plant cost, Design cost, Manufacturing costs, Value analysis in costing, Value analysis vs. value engineering, Overhead costs, Activity based costing, Learning curve, Cost models, Life cycle costing. (6 Hrs)

Books Recommended

1. Ulrich Karl T and Eppinger Steven D. "Product design and Development", McGraw-Hill Inc. 2000.

2. Trott Paul, "*Innovation Management and New Product Development*", Financial Times Professional Ltd, London, 2000.
3. Otto Kelvin and Wood Kristen, "*Product Design*", Pearson Education, Delhi, 2001.
4. Bruce M and Cooper Rachel, "*Creative Product Design*", John Wiley & Sons Ltd., New York, 2000
5. R. Paneerselvam, "Engineering Economics", Prentice Hall of India (PHI), New Delhi, 2004.
6. Hartman, "Engineering Economy and Decision Making Process", Pearson Education Asia, 2007

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- ELECTIVE II

L	T	P/D	Cr
3	1	-	3.5

The Elective II will be offered from the list of electives.

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- OPEN ELECTIVE I

L	T	P/D	Cr
3	1	-	3.5

This subject will be offered by some department.

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- 407 CAD/CAM (PRACTICAL)

L	T	P/D	Cr
-	-	3	1.5

LIST OF EXPERIMENTS

Following experiments will be performed in the Lab using **CATIA SOFTWARE**.

1. Sketch and Assembly of Plumber Block.
2. Sketch and Assembly of Tool-Post.
3. Sketch and Assembly of Blow off Cock.

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-409 PRIDE LAB

L	T	P/D	Cr
-	-	3	1.5

The lab is under development.

B.TECH. (7ᵗʰ SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-411 MINOR PROJECT

L	T	P/D	Cr
-	-	9	4.5

The student is expected to take up a project under the guidance of teacher from the college. The project must be based on the mechanical engineering problems, which will extend full academic session in two parts. The student may be asked to work individually or in-group with not more than four students. Viva-voce must be based on the preliminary report submitted by student(s) related to project.

B.TECH. (7th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-413 PRACTICAL TRAINING REPORT

L	T	P/D	Cr
-	-	-	3.0

Student will submit summer training (about 6 week's industrial training) report for his/her assessment.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-402 INDUSTRIAL INSPECTION AND NON-DESTRUCTIVE TESTING

L	T	P/D	Cr
3	1	-	3.5

Magnetic Particle Testing: Magnets and magnetic materials. Magnetization and its methods, Magnetic fields. Detection media, Application of magnetic particles testing. Testing equipments machines and accessories, Inspection and interpretation. Application in industry.
(6 hrs)

Liquid Penetrant Testing: Principle of liquid penetrant testing, Methods, Their advantages and disadvantages. Equipment used, Penetrant materials. Testing procedures, Inspection and interpretation, Application in industry.
(6 hrs)

Electromagnetic Methods: Eddy current theory, Magnetic flux leakage theory, Eddy current sensing probes, Flux leakage sensing probes, Principle of electromagnetic testing, Mathematical analysis. Flaw detection in conductors, Various types of eddy current techniques used and advantages of various electromagnetic methods for crack detection etc.
(8 hrs)

Radiography: Principle of radiography, Types of radiography, Equipments for neutron radiography, X-ray radiography, Equipments for X-ray radiography. Advantages and applications of fluoroscopy and photo fluoroscopy.
(6 hrs)

Ultrasonic Methods: Physical principle of sound, Ultrasonic waves propagation and their characteristics. Generation of ultrasonic waves, Ultrasonic transducers. Ultrasonic testing equipment. Ultrasonic flaw detector, Fundamental of ultrasonic testing, Contract and immersion testing, Merits and demerits. Defect location in angle beam testing. Immersion testing techniques, Ultrasonic signal display, Detection of defects and their characterization. DGS methods. Time of flight diffraction method (TOFD).
(10 hrs)

Hardness Testing: Brinell hardness testing, Rockwell hardness tests, Micro hardness testing, Vicker hardness testing and theory behind various hardness testing methods. (4 hrs)

Books Recommended

1. Malhotra, "*Handbook on Non-destructive Testing of Concrete*", Publisher: CRC Press, 2002.
2. Mix, Paul E. "*Introduction to Nondestructive Testing: A Training Guide*", John Wiley and Sons Ltd, 1999.
3. Blitz and Jack, "*Electrical and Magnetic Methods of Nondestructive Testing*", Institute of Physics Publishing, 2001.
4. Hemrique L. M. "*Non Destructive Testing and Evaluation for Manufacturing and Construction*", Hemisphere Publishers, New York, 2001.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-404 MAINTENANCE AND RELIABILITY ENGINEERING

L	T	P/D	Cr
3	1	-	3.5

Introduction: Importance of maintenance, Objectives, Duties and policies of maintenance. Organization and structure of a maintenance system. (8 hrs)

Maintenance Policies and Planning: Maintenance strategies. Planned maintenance procedure. Scientific maintenance safety aspects in maintenance. Simulation of various maintenance systems. Development of planned maintenance schedule, Budgeting and cost control, Production maintenance integration. (8 hrs)

Replacement Policies and Models: Economic models, Maintenance man power planning, Maintenance down time analysis, Mathematical models, Simulation models, Concept of maintainability and availability. (8 hrs)

Introduction of Reliability Engineering: Definition, Brief description of topics: designing for reliability, Reliability tests, Measurement for reliability, Maintainability and reliability. (8 hrs)

System Reliability: Quantitative estimation of reliability economics. Optimal design configuration of series/parallel system. (8 hrs)

List of Recommended Books:

1. Maintenance Planning and Control by Enthory Kelly, EWP-NWP, N. Delhi 1984.

2. Reliability Engineering by A.W. Von, Prentice Hall, N.D., 1982.

3. Principles of Planned Maintenance by Clifton R.H., McGraw Hill, 1986.

4. Queues, Inventories and Maintenance by P.M. Morse, Prentice Hall, NY.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-406 EXPERIMENTAL DESIGN TECHNIQUES

L	T	P/D	Cr
3	1	-	3.5

Introduction: Objectives for experimental design, Basic design concepts, Steps in designing the experiments, Types of experimental designs, Analysis of means, Six sigma. **(6 hrs)**

Statistical Inference: Generation of hypotheses, Testing of hypotheses, OC curve, Tests on means, Tests on variances, Assessing normality, ANOVA rationale, Confidence limits on means, Components of variance. **(8 hrs)**

Completely Randomized Design: Model for a completely randomized design with a single factor, ANOVA for a completely randomized design, Randomized block design, Incomplete block design, Latin square design, One way ANOVA, Two way ANOVA, Balanced ANOVA. **(8 hrs)**

Full Factorial Design: Nature of factorial designs, Estimation of Interactions, Main effect estimates, The 2^J design, Built-in-replication, 3^3 design, Confounding systems, Block confounding without replication. **(6 hrs)**

Robust Designs: DOE and Taguchi approach, Experimental Design using orthogonal arrays, Experimental design with two and three level factors, ANOVA for Taguchi method, Signal-to-Noise Ratio, Case study on application of robust design. **(6 hrs)**

Regression: Simple Linear Model, Least Squares line, Lack of fit test, Curvilinear Regression, Orthogonal polynomials. **(6 hrs)**

Books Recommended

1. Modern Experimental Design by Thomas P Ryan, John Wiley Publishers, NY, 2003.
2. Design of Experiments using the Taguchi Approach by Ranjit K Roy, John Wiley, NY, 2006.
3. Fundamental Concepts in Design of Experiments, Charles R. Hicks, Oxford University Press, NY, 1999.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- ELECTIVE III

L	T	P/D	Cr
3	1	-	3.5

Elective III will be offered from the list of electives.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- OPEN ELECTIVE II

L	T	P/D	Cr
3	1	-	3.5

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-408 NDT LAB

L	T	P/D	Cr
-	-	2	1.0

LIST OF EXPERIMENTS

1. To study and conduct experiments on Dye penetrating Testing.
2. To study and conduct experiments on Ultrasonic Flaw Detector.
3. To study and conduct experiments on Magnetic Particle Testing.
4. To study and conduct experiments on Electro magnetic methods.
5. To study and conduct experiments on Liquid Penetrant Testing.
6. To study and conduct experiments on Radiography.

B.TECH. (8ᵗʰ SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-410 OPTIMIZATION LAB

L	T	P/D	Cr
-	-	2	1.0

The lab is under development.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-412 MAJOR PROJECT

L	T	P/D	Cr
–	–	9	9.0

The student is expected to finish the remaining portion of the project.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-414 SEMINAR-II

L	T	P/D	Cr
-	-	2	1.0

Student will give another talk on some new technical topics.

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-416 COMPREHENSIVE VIVA-VOCE

L	T	P/D	Cr
-	-	-	3.0

B.TECH. (8th SEMESTER) INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-418 GENERAL FITNESS AND PROFESSIONAL APTITUDE

L	T	P/D	Cr
-	-	-	3.5

B.TECH. (INDUSTRIAL ENGINEERING & MANAGEMENT)

LIST OF ELECTIVES

1. **IEM-001** Supply Chain Management And Logistics
2. **IEM-002** Management Information Systems
3. **IEM-003** Industrial Instrumentation
4. **IEM-004** Enterprise Resource Planning
5. **IEM-005** Computer Integrated Manufacturing
6. **IEM-006** Modeling And Simulation
7. **IEM-007** Marketing And Financial Management
8. **IEM-008** Productivity Engineering And Management
9. **IEM-009** Energy Management
10. **IEM-010** Strategic Entrepreneurship
11. **IEM-011** Total Quality Management

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- 001 SUPPLY CHAIN MANAGEMENT AND LOGISTICS

L	T	P/D	Cr
3	1	-	3.5

Understanding the Supply Chain: Objectives of supply chain, Stages of supply chain, Supply chain process cycles, Customer order cycle, Replenishment cycle, Manufacturing cycle, Procurement cycle, Push/pull view of supply chain processes, Importance of supply chain flows, Examples of supply chain. (6 hrs)

Supply Chain Performance: Supply chain strategies, Achieving strategic fit, Product life cycle, The minimize local cost view, The minimize functional cost view, The maximize Company profit view, The maximize supply chain surplus view. (6 hrs)

Supply Chain drivers and Obstacles: Four drivers of supply chain – inventory, transportation, facilities, and information, A framework for structuring drivers, Role of each driver in supply chain, Obstacles to achieve strategic fit. (4 hrs)

Planning Demand and Supply in a Supply Chain: Role of forecasting in a supply chain, Forecasting methods in a supply chain, Basic approach to demand forecasting, Time series forecasting methods, Role of aggregate planning in a supply chain, Aggregate planning resources. (6 hrs)

Managing economies of scale in a supply chain: Role of cycle inventory in a supply chain, Economies of scale to exploit fixed costs, Economies of scale to exploit quantity discounts, Short term discounting, Estimating cycle inventory related costs, Determining appropriate level of safety inventory. (6 hrs)

Transportation in a supply chain: Facilities affecting transportation decisions, Modes of transportation and their performance characteristics, Design options for a transport network, trade-offs in transportation decision, Tailored transportation, Routing and scheduling in transportation, Making transportation decisions in practice. (8 hrs)

Coordination in a Supply chain:
Lack of supply chain coordination and the Bullwhip effect, Effect of lack of coordination on performance, Obstacles to coordination, Managerial levers to achieve coordination, Achieving coordination in practice. (4 hrs)

Books Recommended
1. Christopher Martin, "*Logistics and Supply Chain Management*", Pearson Education Asia. (2002).
2. Meindl Peter, "*Supply Chain Management – Strategy, planning and operation's*", Pearson Education, Asia (2002).
3. Kapoor K. K, Kansal Purva, "*Marketing logistics: A Supply Chain Approach*", Pearson Education Asia (2003).
4. Monks T.G., "*Schaum's Outlines Operations Management*", Tata McGraw-Hill (2001).
5. Buffa, "*Modern production/operations Management*", Wiley Eastern Ltd. (2000).

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-002 MANAGEMENT INFORMATION SYSTEMS

	L	T	P/D	Cr
	3	1	-	3.5

The Meaning and Role of MIS: What is MIS? Decision support systems, Systems approach, The systems view of business, MIS, MIS organization within the company management organizational theory and the systems approach, Development of organizational theory, Management and organizational behavior, Management information and the system approach. (8 hrs)

Systems for Decision Making: Evolution of an information systems, Basic information systems, Decision making and MIS, MIS as a technique for making programmed decision assisting information systems, Strategic and project planning for MIS : General business planning, appropriate MIS planning-general, MIS planning –details. (8 hrs)

Conceptual System Design: Define the problems, Set system objectives, Establish system constraints, Determine information needs, Determine information sources, Develop alternative conceptual; Designs and select one document the system concept, Prepare the conceptual, Design report. (8 hrs)

Detailed System Design: Inform and involve the organization, Aim of detailed design, Project management of MIS detailed design, Identify dominant and trade off criteria, Define the subsystems, Sketch the detailed operating subsystems and information flow, Determine the degree of automation of each operation, Inform and involve the organization again, Inputs, And processing, early system testing, Software, Hardware and tools, Propose an organization to operate the system, Document the detailed design, Revisit the manager –user. (8 hrs)

Implementation evaluation and maintenance of the MIS: Plan the Implementation, Acquire floor space and plan space layouts, Organize for implementation, Develop, Procedures for implementation, Train the operating personnel, Computer related acquisitions, Develop forms for data collection and information dissemination, Develop the files, Test the system, Cutover, Document the system, Evaluate the MIS control and maintain the system, Pitfalls in MIS development: Fundamental weakness, Soft spots in planning, Design problems, Implementation. (8 hrs)

Books Recommended:

1. *Management Information systems*- by W.S. Jawadekar-Tata McGraw Hill.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM- 003 INDUSTRIAL INSTRUMENTATION

L	T	P/D	Cr
3	1	-	3.5

Introduction: Definition, Application of measurement instrumentation. Functional elements of a generalized measuring system. Measuring standards. Types of measurement. Types of input to measuring instruments and instrument system. Classification of measuring instruments, Merits and demerits of mechanical measuring systems. Comparison of mechanical measuring system with electrical measuring systems. Calibration. **(6 hrs.)**

Generalized Performance Characteristics of Instruments: Introduction. Types of error. Types of uncertainties. Propagation of uncertainties in compound quantity. Static performance parameters: accuracy. Precision, Resolution, Static sensitivity. linearity. Hysteresis. Dead band, Backlash, And drift., Sources of error. Selection of a measuring instrument, Mechanical and electrical loading, Fundamentals of dynamic characteristics, Generalized mathematical model of measuring systems. Types of input. Dynamic performance parameters: dynamic error. Speed of response. Etc. dynamic response of a first order mechanical systems with different inputs e.g. step. Ramp, sinusoidal and impulse input. **(8 hrs.)**

Statistical Analysis of Experimental Data: Introduction. Types of measuring data. Statistical attributes. Various method of presentation. Estimation of presentation and uncertainties. Confidence level. Precision and statistical treatments of single and multi sample type experimental data. Chauvenet's criteria of rejecting a dubious data. Curve fitting. Best linear calibration and its precision, significant figures and rounding off. Overall uncertainties estimation of measuring systems. Common sense approach and engineering applications. **(6 hrs.)**

Transducers: Introduction. Primary function. Classification. electrostatic transducers: principle theory. Types, advantages, And limitations. Fixed contact mechno-resistive transducers: classification. And uses. Metallic resistance strain gauge: types. Construction theory of operation, Adhesive: property, Selection criteria, Mounting of strain gauges. Mathematical analysis of ballast and DC Wheatstone bridge circuits. Characteristics and comparison of ballast and DC Wheatstone bridge circuits. Temperature effects and their compensation. **(8 hrs.)**

Measuring of Non-Electrical Physical Quantities: Measurement of load, Force, and thrust using resistant strain gauges. Elastic load cells, Proving rings. Fluid pressure measurement in pipe and containers. Using strain gauges. Measuring of torque in transmission shaft under axial and bending loads in varying ambient conditions. **(6 hrs.)**

Control Systems: Introduction. Classification of control systems. Control system terminology. Servomechanism, Process control and regulators. Manual and automatic control systems. Physical systems and mathematical models, Linear control systems. Laplace transform, Transfer function, Block diagram. Signal flow graphs. System stability. Time and frequency domain. Hydraulic control systems: hydraulic pump. Hydraulic control valve. Pneumatic control systems: pneumatic nozzle. Relay. Advantages and limitation of such control systems. **(8 hrs.)**

Books Recommended:

1. *Mechanical Measurements & Control-* By D.S. Kumar, Metropolitan Books.
2. *Instrumentation and Mechanical Measurements-* By A.K. Tayal, Galgotia Publishers, N.D.
3. *Measurements Systems Application and Design-* By Ernest Doebelin, McGraw-Hill, NY.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-004 ENTERPRISE RESORUCE PLANNING

L	T	P/D	Cr
3	1	-	3.5

Introduction: Evolution of ERP. Reasons for growth of ERP market, Advantages of ERP, Integrated management information, Business modeling, Integrated data model.
(4 hrs)

ERP and Related Technologies: Business process reengineering, Management information system, Decision support system, Executive information system (EIS),Data warehousing, Data mining, on-line analytical processing (OLAP),Supply chain management.
(5 hrs)

ERP-A Manufacturing perspective: ERP, CAD/CAM, Material requirement planning, Manufacturing resource planning-II, Distributed requirement planning (DRP), JIT an Kanban, Product data management, Data management. Benefits of PDM.
(6 hrs)

ERP Modules: Finance, Plant maintenance, Quality management, Materials management.
(4 hrs)

ERP Market: SAP AG, Baan Company, Oracle Corporation, PeopleSoft, JD Edwards world Solutions Company, System Software Associates, Inc. (SSA), QAD. Benefits of ERP.
(5 hrs)

ERP Implementation Life Cycle: Pre-evaluation screening, Package evaluation, Reengineering, Testing, Post implementation., Vendors, Consultants and users. ERP case studies, In-house implementation – pros and cons.
(8 hrs)

Future direction in ERP: Introduction, New markets, New channels, faster implementation methodologies, Business models and BAPIs, Convergence on Windows NT, Application platforms, New business segments.
(8 hrs)

Books Recommended

1. Ptak, Carol A., Schragenheim Eli, "*ERP* ", CRC Press .2003.
2. Leon, "*ERP Demystified*", Tata McGraw-Hill, 1999.
3. Raman, Thothathri A, Diwan Parag; "*ERP Genie: Have One Of Your Own*", Vikas Publishing House Pvt Ltd. 2002.
4. Garg, Vakharia, Jaico, "*ERP*", Strategy Publishing House, 2002.
5. Sadagopan; "*ERP: A Managerial Perspective*", Tata McGraw-Hill, 2001.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-005 COMPUTER INTEGRATED MANUFACTURING

	L	T	P/D	Cr
	3	1	-	3.5

Introduction: Introduction to manufacturing enterprise. External and internal changes, World-class winning criteria. Introduction to CIM concepts. Three step process for CIM implementation. (6 hrs)

Manufacturing Systems: Manufacturing classifications. Product development cycle. Enterprise organization. (4 hrs)

Design Automation: Computer-Aided Design and Engineering: Introduction, General system operation, CAD classification: Hardware and software platforms. Application of CAD to manufacturing systems. Design for manufacturing and assembly. Computer-aided engineering analysis and evaluation. (6 hrs)

Manufacturing Planning and Control: Introduction, Planning the manufacturing planning and control system, Master production schedule. Inventory management. Product data management. (5 hrs)

Material Planning, Production Scheduling and Operating Systems: Material requirement Planning. Capacity requirement planning, MRP II. Just-in-time manufacturing. (5 hrs)

Enterprise Resource Planning: MRP II—a driver of effective ERP systems. Information technology. The decision to implement ERP system. Features of modern manufacturing planning and control systems. (5 hrs)

Production Support Machines and Systems: Industrial robots. Automated material handling systems. Automated guided vehicles. Automated storage and retrieval systems. (4 hrs)

Machine and System Control: System overview, Cell control. Proprietary versus Open system interconnects software. Device control, Programmable logic controllers. Computer numerical control. Automatic tracking. Network communications. (5 hrs)

Recommended Books:

1. *Computer-integrated manufacturing*, James A. Rehg and Henry W. Kraebher, Pearson Education.
2. *Computer Integrated Manufacturing Technology and Systems*, U. Rembolt, C. Blume, R. Dillmann, Dekker, 1985.
3. *Computer Integrated Design and Manufacturing*, D.D. Bedworth, M.R. Henderson, P.M. Wolfe, McGraw Hill.
4. *Systems Approach to Computer Integrated Design and Manufacturing*, N. Singh, John Wiley & Sons.

INDUSTRIAN ENGINEERING AND MANAGEMENT
IEM-006 MODELING AND SIMULATION

L	T	P/D	Cr
3	1	-	3.5

Introduction: Nature of simulation, Advantages and disadvantages, Areas of application, System and system environment, Component of a system, Discrete and continuous system, Types of model, Steps in a simulation study, Simulation examples. **(5 hrs)**

General Principles of Simulation: Concepts in discrete-event simulation, Event-scheduling/time advance algorithm, Manual simulation using event scheduling, simulation softwares: classification, Desirable software features, General purpose simulation packages. **(6 hrs)**

Statistical Models in Simulation: Terminology, Useful statistical models: discrete distributions, Continuous distributions, Poisson's process. **(4 hrs)**

Random Number Generation: Properties of random numbers, Generation of Pseudo-random numbers, Techniques of generating random numbers. **(6 hrs)**

Random-Variate Generation: Inverse transform technique, Acceptance-rejection technique, Direct transformation of generating random numbers. **(5 hrs)**

Input Modeling: Data collection, Identifying the distribution with data: histograms, Selecting the family of distributions, Parameter estimation, Selecting input models without data. **(5 hrs)**

Verification and Validation: Model building, Verification of simulation models, Calibration and validation of models. **(4 hrs)**

Output Analysis: Types of simulation with respect to output analysis, Stochastic nature of output data, Measures of performance and their estimation, Output analysis for terminating simulation and steady state simulation, Case studies of simulation of manufacturing systems. **(6 hrs)**

Recommended Books

1. *Simulation Modeling and Analysis*, Averal M. Law and W. David Kelton, McGraw Hill.
2. *Discrete-Event System Simulation*, J. Banks, J. S. Carson & B. L. Nelson, Prentice Hall.
3. *Theory of Modeling & Simulation*, B.P. Zeigler, Tag gon Kim and Herbert Praehofer, Academic Press.
4. *Handbook of Simulation: Principles, Methodology, Advances, Applications & Practice*, Jerry Banks.
5. *Discrete Systems Simulation*, Khoshnevis.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-007 MARKETING AND FINANCIAL MANAGEMENT

L	T	P/D	Cr
3	1	-	3.5

Introduction: Need, Want, Demand, Production, Product, Selling, Marketing and societal concepts of marketing, Types of goods. (4 hrs)

Marketing Process: Analyzing marketing opportunities, Researching and selecting target markets, Positioning the offer, Designing and marketing strategies, Planning marketing program, Organizing, Implementing & controlling marketing efforts. (4 hrs)

Consumer Behavior & Market Research: Factors affecting consumer behavior, stages in purchasing, Market research, Market segmentation and target market selection. (4 hrs)

Organizational Buying: Salient features, Factors affecting organizational purchase marketing mix, product, Product levels, Product hierarchy, Product line, Types of distributions, Channel management decisions, Product mix, Product life cycle, Procedure for new product development, Branding and packaging. (6 hrs)

Price: Pricing objectives, Price elasticity of demand,' Methods of pricing, Discounts, Discriminatory pricing. (4 hrs)

Distribution: Need for middleman and their functions, Vertical marketing system. (4 hrs)

Promotion Mix: Advertising, Media selection, Frequency and timing of advertisement, Steps in developing effective communication, Sales promotion, Personal selling, Publicity. (5 hrs)

Sales Force Management: Recruitment, Training, Motivating sales representatives, Controlling and evaluating. (5 hrs)

Basic Valuation Concepts: Time value of money, Methods of dealing with time value of money, Future value of a single cash flow, Future value of annuity, Present value of a single cash flow, Present value of annuity, Risk and return concept, Valuation of bonds, Securities and equities Principles of accounting, Balance sheet, Income statement, Financial ratios. (5 hrs)

Books Recommended

1. Winer Russel S, "*Marketing Management*", Prentice Hall of India, 1998.
2. Guiltinan Joseph P, Gordon W Paul and Thomas J Maddaen, "*Marketing Management: Strategies and Programs*", McGraw-Hill Publication, 1996.
3. Dolan Robert J, "*Marketing Management: Text & Cases*", McGraw Hill Publication, 2000.
4. Lamb Charles W and McDaniel Carl D, "*Marketing*", South Western College Publication, 2004.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-008 PRODUCTIVITY ENGINEERING AND MANAGEMENT

L	T	P/D	Cr
3	1	-	3.5

Introduction: Productivity Basics: Concern and the significance of Productivity Management, The rationale of Productivity Management, Same perspectives of Productivity, Productivity measurement: A case for reappraisal. (6 hrs)

Productivity Measurement Models: A Review: Concepts of Productivity: a review, Basis for review. Review of models of productivity measurements. A critical appraisal of various approaches. Need for new approach. (6 hrs)

Productivity Measurement: a Conceptual Framework: Objectives of Productivity measurement, MBO and productivity measurement, systems approach to productivity measurement. Performance objectives. (8 hrs)

Productivity Measurement in Manufacturing Sector: Productivity measurement in small sized, Medium sized and large sized organization. Case studies. (6 hrs)

Productivity Measurement in Service Sector: Need for measuring productivity in service sector. Difficulties in measuring productivity in service sector. Productivity of an R&D system. Productivity of an educational institution. (6 hrs)

Productivity Management and Implementation Strategies: Productivity management system. Productivity policy, Organization and planning, Productivity measurement evaluation. Productivity improvement strategies. (8 hrs)

Books Recommended

1. *Productivity Management* by Prem Vrat, Sardana and Sahai.
2. *Industrial Engineering and Management* by Ravi Shankar, Galgotia Publications, Noida.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-009 ENERGY MANAGEMENT

L	T	P/D	Cr
3	1	-	3.5

Planning for Energy Management: Initiation phase, Audit and analysis phase, Implementation phase, General methodology for building and site energy audit, site survey, Methodology, Site survey-electrical system, Steam and water systems, Building survey methodology, Basic energy audit instrumentation, Measurement for building surveys. (6 hrs)

Management of Heating and Cooling: General principles, The requirements for human comfort, Description of typical systems-dual duct HVAC system, Multi zone HVAC systems, Variable and volume systems, Terminal repeat system, Evaporative systems, Package system, basic principle governing HVAC system, Package system, Basic principle governing HVAC system operation, Energy management opportunities in HVAC systems. (6 hrs)

Electrical Load and Lighting Management: General principles, Illumination and human comfort, Basic principles of lighting system, Typical-illumination system and equipment, Fundamentals of single phase and 3 phase A.C. circuits, Energy management opportunities for lighting systems, Motors and electrical heat, Electrical and analysis and their parameters, Peak, demand control. (6 hrs)

Management of Process Energy: General principles, Process heat, Combustion, Energy saving in condensate return, Steam generation and distribution, Automotive fuel control, Hot water and water pumping, Direct and indirect fired furnaces over, Process electricity, Other process energy forms-compressed air and manufacturing processes, Problems. (6 hrs)

The Economics of Efficient Energy Use: General consideration, Life cycle costing, Break-even analysis, Cost of money, Benefit/cost analysis, Pay back period analysis, Prospective rate of to return, Problems. (5 hrs)

Energy Considerations in Buildings: Environmental conformation, Passive design, Conservation building envelope design consideration, Integration of building system, Energy storage problems. (5 hrs)

Use of Computer for Energy Management: Energy management principle involving computers, Basics of computer use, Analysis-engineering and economic calculations, Simulation, Forecast, CAD/CAM controls – microprocessor and minicomputers, Building cycling and control, Peak demand limiting and control, industrial power management, Problems. (6 hrs)

Books Recommended:

1. *Energy Management Principles* by Criag B. Smith, Pergamon Press.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-010 STRATEGIC ENTERPRENEURSHIP

L	T	P/D	Cr
3	1	-	3.5

Small Scale Industries: Definition and types of SSI's; Role, Scope and performance in national economy; Problems of small scale industries. **(4 hrs)**

Industrial Sickness: Definition; Causes of sickness; Indian scenario, Government help; Management strategies; Need for trained entrepreneurs. **(6 hrs)**

Entrepreneurship Development Programmes: Introduction, Origin of EDP's. Organizations involved in EDP's, Objectives of EDPs, Implementation of EDP's, Short comings of EDP's. Role in entrepreneurship development. **(6hrs)**

STEP: Introduction, Origin, Status in India. Success and failure factors, Govt. polices and incentives. Future prospects in India. **(6 hrs)**

Business Incubation: Introduction, Origin and development of business incubators in India and other countries. Types of incubators. Success parameters for a business incubator. Benefits to industries, institutes, Government and society; future prospects. A few case studies (at least 2) **(6 hrs)**

Special Aspects of Entrepreneurship: Entrepreneurship, Social entrepreneurship. International entrepreneurship, Rural entrepreneurship. Community Development, Women entrepreneurship. **(6 hrs)**

Network Marketing: Introduction, E-business, E-commerce, E-auction, A basic Internet E-Business architecture, A multi tier E-Business Architecture. **(6 hrs)**

Books Recommended:

1. *Strategic Entrepreneurship* by P.K. Gupta, Everest Publishing House.

2. *Project Management–Strategic Design and Implementation* by David Cleland, McGraw-Hill, NY.

3. *Entrepreneurship-New Venture Creation* by David H Holl, Prentice Hall of India.

4. *Sustainable Strategic Management* by Steed & Steed, Prentice Hall of India.

5. *Marketing Management* by Kotler, Prentice Hall of India.

6. *Management of Technology* by Tarek Khalil, McGraw-Hill.

INDUSTRIAL ENGINEERING AND MANAGEMENT
IEM-011 TOTAL QUALITY MANAGEMENT

L	T	P/D	Cr
3	1	-	3.5

Concepts of Quality: Products and services. Quality of products and services. Definition of quality. Dimensions of quality and their measure, Basic approach, Historical review.   (6 hrs)

Customer –Supplier Chain: Concepts of external and internal customer. Concepts of process and models of process. Customer and supplier requirements. Customer orientation.   (6 hrs)

Quality Management Practices: Various approaches to control and management of quality. Inspection oriented. Statistical process control oriented. Assurance oriented and TQM oriented approaches.   (6 hrs)

Cost of Quality: Productivity. Quality connection concept of cost of quality. Cost of conformance, Prevention, Appraisal and failure cost. Internal and external failure. Quality cost estimation in engineering and service industries.   (6 hrs)

Organizing for Quality: Company wide organization for quality management. Prevention, control and improvement. Continuous improvement process.   (8 hrs)

Human Aspects in Management of Quality: Commitment . Motivation, and Involvement for quality –Top management, Management and worker participation. Zero defects. Quality circle. Small group activity.   (8 hrs)

Books Recommended:

1. *Total Quality Management* by Suresh Modi
2. *Total quality Control* by Armand Feigenbaum. Tata McGraw-Hill, NY.
3. *In pursuit of Quality* by David Hutchings
4. *Total Quality Management* by Besterfield. PHI, ND.