

# NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

## AGENDA

For

**39<sup>th</sup> MEETING OF SENATE (online)**



**Date & Time: 23<sup>rd</sup> July 2020 at 11.00 a.m.**

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**S 39.01 To confirm the minutes of 38<sup>th</sup> Senate meeting held on 6.2.2020.**

The minutes of 38<sup>th</sup> Senate meeting held on 6.2.2020 were circulated among Senate members through email dated 15.02.2020. No comments have been received from any member of the Senate. The minutes are enclosed as Annexure S 39.01 from pages 2 to 8.

The Senate may confirm the minutes of 38<sup>th</sup> Senate meeting held on 6.02.2020.



# NATIONAL INSTITUTE OF TECHNOLOGY KURUKSHETRA

## MINUTES OF 38<sup>th</sup> MEETING OF THE SENATE

Minutes of the 38<sup>th</sup> meeting of the Senate, NIT, Kurukshetra held on 6<sup>th</sup> February 2020 at 4.30 p.m. in the Senate Hall of the Institute.

### MEMBERS PRESENT

- 1 Dr. Satish Kumar Chairperson  
Director  
National Institute of Technology  
Kurukshetra

### Internal Members (Department wise & in alphabetical order)

#### Business Administration

- 2 Prof Neeraj Kaushik. Associate Prof & HOD
3. Prof Rajendra Kumar. Professor

#### Civil Engineering Department

4. Prof Anupam Mittal, Professor
5. Prof. Arun Goel, Professor
6. Prof. Baldev Setia, Professor
- 7 Prof H.K. Sharma, Professor
8. Prof. K.K Singh, Professor
- 9 Prof Mahesh Pal, Professor
10. Prof Saraswati Setia, Professor
- 11 Prof. S.K. Madan, Professor
- 12 Prof S.K. Patidar, Professor
13. Prof S.M Gupta, Professor
14. Prof S.N Sachdeva, Professor

#### Computer Engineering Department

15. Prof Mayank Dave, Professor
16. Prof S.K Jain, Professor
17. Prof R.K. Aggarwal, Professor

### Chemistry Department

- 18. Prof. Dinesh Kumar, Professor
- 19. Prof. D.P. Singh, Professor
- 20. Prof. Minati Baral, Professor

### Computer Application Department

- 21. Prof. Ashutosh Kumar Singh, Professor

### Electrical Engineering Department

- 22. Prof. A.Swarup, Professor
- 23. Prof. Ashwani Kumar, Professor
- 24. Prof. G.L. Pahuja, Professor
- 25. Prof. K.S. Sandhu, Professor
- 26. Prof. Lillie Dewan, Professor
- 27. Prof. Ratna Dahiya, Professor
- 28. Prof. Sathans, Professor

### Electronics & Communication Engineering Department

- 29. Prof. Brahmjit Singh, Professor
- 30. Prof. Rajoo Pandey, Professor
- 31. Prof. R.K. Sharma, Professor
- 32. Prof. Umesh Ghanekar, Professor
- 33. Prof. N.P. Singh, Associate Prof. & HOD

### Humanities & Social Sciences Department

- 34. Prof. Vikas Choudhary, Professor

### Mechanical Engineering Department

- 35. Prof. Ajai Jain, Professor
- 36. Prof. Dixit Garg, Professor
- 37. Prof. Gian Bhushan, Professor
- 38. Prof. Hari Singh, Professor
- 39. Prof. Meenu, Professor
- 40. Prof. P.C. Tiwari, Professor

### Mathematics Department

- 41. Prof. A.S.V. Ravikanth, Associate Prof. & HOD

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### Physics Department

42. Prof R.P Chauhan, Professor

### Member of BOG as Special Invitee

43. Prof Rupanshi Batra, Associate Professor, EED

### Special Invitee

44. Dr. J.K. Kapoor, Associate Professor, Chemistry Deptt. & Prof. I/C (Acad.)

### The following members could not attend the meeting

- |    |   |                 |
|----|---|-----------------|
| 1  | Dr S.K Mehta, Professor<br>Deptt. of Chemistry<br>Punjab University, Chandigarh | External Member |
| 2. | Prof Rashmi Gaur<br>Prof & Head, Dept of HSS<br>IIT Roorkee                     | External Member |
| 3. | Prof Sudhir Kumar<br>Professor (HAG), Deptt of Civil Engg.<br>MNIT Jaipur       | External Member |

### Internal Members

(Department wise & in alphabetical order)

### Civil Engineering Department

- 4 Prof. Ashwani Jain, Professor
5. Prof Parveen Aggarwal, Professor
6. Prof. Pratibha Aggarwal, Professor
- 7 Prof. Subodh Ranjan Professor
8. Prof Surinder Deswal, Professor
9. Prof V.P Singh, Professor

### Computer Engineering Department

10. Prof A.K. Singh, Professor
11. Prof. J.K. Chhabra, Professor

*Handwritten signatures*



### Electrical Engineering Department

12. Prof. Jagdeep Singh Lather, Professor
13. Prof. Jyoti Ohri, Professor
14. Prof. L.M Saini, Professor
15. Prof. R.S. Bhatia, Professor
16. Prof. Yash Pal, Professor

### Mechanical Engineering Department

17. Prof. Dinesh Khanduja, Professor
18. Prof. Pankaj Chandna, Professor
19. Prof. P.K Saini, Professor
20. Prof. Puneet Kumar, Professor
21. Prof. Surjit Angra, Professor
22. Prof. V.K Bajpai, Professor
23. Prof. Vinod Kumar, Professor

### Physics Department

24. Prof. Ashavani Kumar, Professor
25. Prof. Neena Jaggi, Professor

### Electronics & Communication Engineering Department

26. Prof. O.P. Sahu, Professor

### Humanities & Social Science Department

27. Prof. Kiran, Professor

### Mathematics Department

28. Prof. Paras Ram, Professor

At the outset, Hon'ble Director and the Chairman Senate welcomed all Senators. He apprised the Senators about the 17<sup>th</sup> Convocation of the Institute and accorded permission to present the agenda of the meeting.

**The agenda was taken up and the following decisions were taken in the meeting:**

**S 38.01 To confirm the minutes of 37<sup>th</sup> Senate meeting held on 10.12.2019.**

The Senate confirmed the minutes of 37<sup>th</sup> Senate meeting held on 10.12.2019



**S 38.02** To note the action taken report on the minutes of 37<sup>th</sup> Senate meeting held on 10.12.2019.

The Senate note the action taken report on the minutes of 37<sup>th</sup> Senate meeting held on 10.12.2019 with the following observations:

**S 36.03** A letter No. Acad./2019/1113 dt. 15.10.2019 was sent to HoDs of Civil, Mech. Phy., Coordinator, SREE to constitute a Committee to look into the reasons and suggest corrective measures for low admission in M.Tech. in Water Resources Engg., Industrial & Production, Instrumentation and School of Renewable Energy & Efficiency respectively. The Senate deliberated upon the reports of the Committees in detail and approved the following.

- i) Out of 25 seats in M.Tech. Renewable Energy System 10 seats will be allocated to qualifying B.Tech. degrees of Electrical & Mechanical Engg. each while remaining 5 seats will be allocated to qualifying B.Tech. degree of Civil Engg.
- ii) Out of 21 seats in M.Tech. Water Resources Engg., 17 seats will be allocated to qualifying B.Tech. degree in Civil Engg. and remaining 4 seats will be allocated to qualifying B.Tech. degree in Agricultural Engg./Irrigation & Water Management.
- iii) Only GATE qualified candidates will be admitted.
- iv) Fee structure for sponsored and regular M.Tech. students will remain same.

**S 38.03** To note the result summary of the students of various UG and PG Programmes of NIT Kurukshetra passing in year 2019.

The Senate noted the result summary of the students of various UG and PG Programmes of NIT Kurukshetra passing in year 2019.

**S 38.04** To note the result summary of the students of UG programmes of Indian Institute of Information & Technology (IIIT) Sonapat passing in year 2019.

The Senate noted the result summary of the students of UG programmes of Indian Institute of Information & Technology (IIIT) Sonapat passing in year 2019



**S 38.05** To note the placement status of the students of all programmes of the Institute.

The Senate noted the placement status of the students of all programmes of the Institute

**S 38.06** To approve the list of students to be awarded degree in the 17<sup>th</sup> Convocation of the Institute.

The Senate approved the list of students to be awarded degrees in 17<sup>th</sup> Convocation, 2020. It was decided that result declared upto 10<sup>th</sup> Feb. 2020 will be included in the list of students to be awarded degrees in 17<sup>th</sup> Convocation, 2020.

The Senate confirmed the minutes of agenda during the meeting itself and recommended to the Board of Governors for approval

**S 38.07** To approve award of Medals and Prizes to the students of all programmes of the Institute.

The Senate approved the award of Medals and Prizes to the students of all programmes of the Institute.

The Senate confirmed the minutes of agenda during the meeting itself and recommended to the Board of Governors for approval.

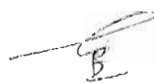
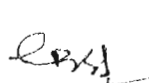
**S 38.08** To approve the list of students of the IIIT Sonapat to be awarded degree during the 17<sup>th</sup> Convocation.

The Senate approved the list of students of the IIIT Sonapat to be awarded degrees in 17<sup>th</sup> Convocation, 2020.

The Senate confirmed the minutes of agenda during the meeting itself.

**S 38.09** To consider conferment of Honorary Degree of Ph.D. (Honoris Causa) on Shri Sampath Ravinarayanan, Engineer, Technopreneur & private sector pioneer in Aerospace and Defense.

The Senate approved the conferment of Honorary Degree of Ph.D (Honoris causa) on Shri Sampath Ravinarayanan, Engineer,



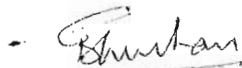


NIT Kurukshetra

Technopreneur & private sector pioneer in Aerospace and Defense. The conferment of Honorary Degree is as per the clause 39 of the First Statute of National Institute of Technology, published in Gazette of India dated 23.4.2009.

The Senate confirmed the minutes of agenda during the meeting itself

The meeting ended with a vote of thanks to the Chair

  
12.02.2020

(Gian Bhushan)  
Dean (Academic)

  
13/04/2020

(Satish Kumar)  
Director & Chairman Senate

  
12/02/20  
(G.R. Samantaray)  
Registrar Incharge & Secretary, Senate

**S 39.02 To note the action taken report on the minutes of the 38<sup>th</sup> meeting of the Senate held on 6<sup>th</sup> February 2020.**

The actions taken on the minutes of 38<sup>th</sup> Senate meeting held on 6.2.2020 are as under: -

**i) Action Taken Report on the minutes of the 38<sup>th</sup> meeting of the Senate (6.2.2020)**

Item No.	Agenda Item	Minutes of the Item (Relevant Excerpts)	Action
S 38.01	To confirm the minutes of 37 <sup>th</sup> Senate meeting held on 10.12.2019.	The Senate confirmed the minutes of 37 <sup>th</sup> Senate meeting held on 10.12.2019.	No further action is required.
S 38.02	To note the action taken report on the minutes of 37 <sup>th</sup> Senate meeting held on 10.12.2019.	The Senate note the action taken report on the minutes of 37 <sup>th</sup> Senate meeting held on 10.12.2019 with the following observations: S 36.03 A letter No. Acad./2019/1113 dt. 15.10.2019 was sent to HoDs of Civil., Mechanical, Physics, Coordinator, SREE to constitute a Committee to look into the reasons and suggest corrective measures for low admission in M.Tech. in Water Resources Engg., Industrial & Production, Instrumentation and School of Renewable Energy & Efficiency respectively. The Senate deliberated upon the reports of the Committees in detail and approved the following: i) Out of 25 seats in M Tech Renewable Energy System, 10 seats will be allocated to qualifying B Tech. degrees of Electrical & Mechanical Engg. each while remaining 5 seats Will be allocated to qualifying B Tech. degree of Civil Engg. ii) Out of 21 seats in M.Tech. Water Resources Engg., 17 seats will be allocated to qualifying B.Tech. degree in Civil Engg. and remaining 4 seats will be allocated to qualifying B.Tech. degree in Agricultural Engg./Irrigation & Water Management. Iii) Only GATE qualified candidates will be admitted. iv) Fee structure for sponsored and regular M.Tech. students will remain same.	Action has been taken. The new admissions for the academic year 2020-21 will be done according to the approved guidelines in the Senate.
6 S 38.03	To note the result summary of the students of various UG and PG	The Senate noted the result summary of the students of various UG and PG Programmes of NIT Kurukshetra	No further action is required.

	Programmes of NIT Kurukshetra passing in year 2019.	passing in year 2019.	
S 38.04	To note the result summary of the students of UG programmes of Indian Institute of Information & Technology (IIIT) Sonapat passing in year 2019.	The Senate noted the result summary of the students of UG programmes of Indian Institute of Information & Technology (IIIT) Sonapat passing In year 2019,	No further action is required.
S 38.05	To note the placement status of the students of all programmes of the Institute.	The Senate noted the placement status of the students of all programmes of the Institute.	No further action is required.
S 38.06	To approve the list of students to be awarded degree in the 17 <sup>th</sup> Convocation of the Institute.	The Senate approved the list of students to be awarded degrees in 17 <sup>th</sup> Convocation, 2020. It was decided that result declared upto 10th Feb. 2020 will be included in the list of students to be awarded degrees in 17th Convocation, 2020. The Senate confirmed the minutes of agenda during the meeting itself and recommended to the Board of Governors for approval	Action has been taken.
S 38.07	To approve award of Medals and Prizes to the students of all programmes of the Institute	The Senate approved the award of Medals and Prizes to the students of all programmes of the Institute. The Senate confirmed the minutes of agenda during the meeting itself and recommended to the Board of Governors for approval	Action has been taken.
S 38.08	To approve the list of students of the IIIT Sonapat to be awarded degree during the 17th Convocation.	The Senate approved the list of students of the IIIT Sonapat to be awarded degrees in 17th Convocation, 2020. The Senate confirmed the minutes of agenda during the meeting itself.	Action has been taken.
S 38.09	To consider conferment of Honorary Degree of Ph.D. (Honoris Causa) on Shri Sampath Ravinarayanan, Engineer, Technopreneur & private sector pioneer in Aerospace and Defense.	The Senate approved the conferment of Honorary Degree of Ph.D. (Honoris causa) on Shri Sampath Ravinarayanan, Engineer, Technopreneur & private sector pioneer in Aerospace and Defense. The conferment of Honorary Degree is as per the clause 39 of the first Statute of National Institute of Technology. published in Gazette of India dated 23.4.2009. The Senate confirmed the minutes of agenda during the meeting itself	Action has been taken.

**S 39.03 To approve the minutes of 58<sup>th</sup> SCSA meeting held online on 07.05.2020**

The minutes of 58<sup>th</sup> SCSA meeting held online on 7.5.2020 were circulated among the members of SCSA & the Senators vide No. Acad./2020/58<sup>th</sup> SCSA/273 dated 08.05.2020 through email dated 08.05.2020 & 11.5.2020 respectively. The minutes are enclosed as Annexure S 39.03 from pages 12 to 18 .

The Senate may approve the minutes of 58<sup>th</sup> SCSA meeting held online on 07.05.2020.

**NATIONAL INSTITUTE OF TECHNOLOGY  
KURUKSHETRA**

No. Acad./2020/58<sup>th</sup> SCSA/ 2-73

Dated: 08.05.2020

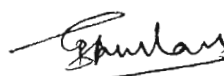
**Subject: Minutes of 58<sup>th</sup> SCSA meeting held online on 07.05.2020 at 11:00 a.m.**

The following members attended the 58<sup>th</sup> SCSA meeting held online, through Google Meet, on May 07, 2020 at 11:00 a.m.

1.	Dr. Satish Kumar, Director
2.	Prof. A. Swarup, Dean (P&D)
3.	Prof. Rajender Deswal, Dean (SW)
4.	Prof. Arun Goel, Dean (FW)
5.	Prof. Pankaj Chandna, Dean (IIR)
6.	Prof. Gian Bhushan, Dean (Acad.)
7.	Prof. Mahesh Pal, Dean (R&C)
8.	Prof. S.N. Sachdeva, Prof. Civil
9.	Prof. Dinesh Khanduja, HoD Mech.
10.	Prof. L.M. Saini, HoD Elect.
11.	Dr. N.P. Singh, HoD ECE
12.	Prof. Mayank Dave, HoD Computer
13.	Prof. R.P. Chauhan, HoD Physics
14.	Prof. Minati Baral, HoD Chemistry
15.	Dr. A.S.V. Ravi Kanth, HoD Maths.
16.	Prof. Kiran More, HoD HSS
17.	Prof. A. K. Singh, HoD CA
18.	Prof. Neeraj Kaushik, HoD BA
19.	Prof. Lillie Dewan, Coordinator SREE
20.	Prof. J.K. Chhabra, Coordinator SVE
21.	Prof. Surinder Deswal, Registrar Incharge
22.	Prof. P.K. Saini, Prof. I/C (Exam)
23.	Prof. J.K. Kapoor, Prof. I/C (Acad)

*Minutes of 58<sup>th</sup> SCSA Meeting held on 07.05.2020.*

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At the outset, Hon'ble Director and Chairman of the Senate welcomed all the members of SCSA in this online meeting, and enquired & wished for the wellbeing of all the faculty/staff members and their families. He talked about global health crisis prevailing in the form of COVID-19 and appreciated efforts of the faculty in conducting online classes and for being in constant touch with the students to uphold their motivation levels. He also stressed upon the need to remain vigilant and prepared for future challenges, as the fight is not yet over. He emphasized that an unprecedented situation like this demands innovative, decisive and coordinated policy action for the conduct of examination by resorting to unusual tools. With the enduring efforts of all, the Hon'ble Director is confident that we will succeed as an Institute, as a society, as a nation, and as the entire global human race in our fight against the virus.

Thereafter, the agenda was taken up for detailed deliberations that lasted for about two hours.

**SCSA 58.01 To consider and approve plan Examination and Academic Calendar / Schedule for the year 2020-2021 in view of COVID-19 Pandemic.**

All the Deans, HoDs, School Coordinators and Registrar I/c expressed their concern for the academic loss, placements & future of the students and wished for the well-being of the students in the prevailing conditions due to COVID-19. The proposed plan for the examinations (UG, PG & PhD) for terminal and intermediate semesters for the current academic session (2019-20) only in view of the COVID-19 Pandemic was deliberated in detail keeping in view all the stated factors in various Government orders/directions/guidelines related to COVID-19, students' feedback, decisions of other premier institutes, and other related issues. After incorporating the suggestions of the members, the following was decided:

**I. Examination of Terminal Semester of B.Tech. and MBA students  
(B.Tech. 8<sup>th</sup> Semester & MBA 4<sup>th</sup> Semester)**

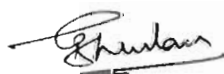
1. Grading of the students for end/external semester examinations to be composite of 50% marks on the basis of the internal evaluation/assessment and the remaining 50% marks on the basis performance in previous semester (i.e. SGPA) only.
2. The students to be given full attendance from March 25, 2020 to April 24, 2020 (i.e. period of lockdown during which online teaching continued). The actual attendance will be attendance in regular mode plus attendance in online mode/lockdown period. In case, the actual attendance falls short of 75%, it is to be treated as 75% so that no student be detained in the prevailing conditions.



3. Marks as obtained in the first test/sessional to be considered for the second test/sessional. In case, a student has not appeared in first test/sessional, the marks to be awarded based on online/offline assignments, etc. for the purpose of internal assessment. The benefit of assignments, etc. be also given to the students who have appeared in first test/sessional by upscaling the marks in first test/assessment.
4. The **Seminars** of the students, if remaining, to be conducted by the concerned teacher through Skype or any other online tool from **27<sup>th</sup> to 29<sup>th</sup> MAY, 2020**.
5. **Project viva-voce, Comprehensive viva-voce & GFPA** to be conducted simultaneously at one go, by a team of faculty members nominated by HoD of the concerned department, through Skype or any other online tool from **1<sup>st</sup> to 3<sup>rd</sup> June, 2020**.
6. The **re-appear exam/assessment** of terminal semesters to be **held along with the regular exams/assessment on similar lines. The students have to apply for re-appear exams after downloading the relevant form from Institute website.** The guidelines for submission of re-appear form will be notified on the Institute website by Academic section.
7. The details for awarding marks/grade in a theory course and practical courses are given in **Annexure I and II** respectively along with illustrations.
8. The awards/results are to be submitted to Examination Cell in the same format and procedure as followed in the Institute by **10<sup>th</sup> June, 2020**.
9. The results may be declared by **30<sup>th</sup> June, 2020**.

**II. Examination of Terminal Semester of M.Tech. & MCA students  
(M.Tech. 4<sup>th</sup> Semester & MCA 6<sup>th</sup> Semester)**

1. The students who have completed their dissertation work need to **submit their final version of thesis/dissertation (.pdf document) online** to the concerned supervisor with a copy to HoD/School Coordinator, examination branch and library.
2. The students whose dissertation work is pending due to experimentation or any other reason are **allowed to submit their thesis/dissertation up to September 30, 2020 without paying any additional fee.** However, those who submit thesis beyond this date are required to pay full semester fee for next semester. It is pertinent to mention



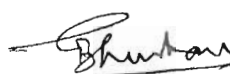


that **GATE scholarship will be paid up to June 30, 2020 or date of submission of thesis whichever is earlier**, subject to fulfilment of conditions for the scholarship.

3. The **viva-voce to be conducted online** through skype or any other online tool. The HoD/School coordinator may appoint one Internal faculty member (subject expert) who in coordination with supervisor may conduct viva-voce. It is pertinent to mention that **no external examiner** will be appointed for conduct of viva-voce.
4. As the students may not be able to present their papers in conferences due to prevailing conditions of COVID-19, the conditions/need of publications for securing particular grade stands waived-off. However, in case a student has published/presented papers in Journals/Conferences, due weightage/ consideration be given accordingly while awarding marks/grade.
5. The result in the same format and procedure as followed in the Institute is to be submitted to Examination Cell within five days of conduct of viva-voce.
6. The results may be declared within fortnight of conduct of viva-voce.

### III. Examination of Intermediate Semesters of UG, PG and PhD course work

1. Grading of the students for the end/external semester examinations (theory, practical, seminar etc.) of all intermediate semesters (odd and even both) to be composite of 50% marks on the basis of the internal evaluation/assessment and the remaining 50% marks to be on the basis of performance (i.e. SGPA) in previous semester only. In the situations where previous SGPA of previous semester is not available (i.e. like for students of 1<sup>st</sup> semester & Ph.D students ) 100% evaluation may be done on the basis of internal assessments.
2. The students to be given full attendance from March 25, 2020 to April 24, 2020 (i.e. period of lockdown during which online teaching continued). The actual attendance will be attendance in regular mode plus attendance in online mode/lockdown period. In case, the actual attendance falls short of 75%, it is to be treated as 75% so that no student be detained in the prevailing conditions.
3. Marks as obtained in the first test/sessional to be considered for the second test/sessional. In case, a student has not appeared in first test/sessional, the marks to be awarded based on online/offline assignments, etc. for the purpose of internal assessment. The benefit of assignments, etc. be also given to the students who have appeared in first test/sessional by upscaling the marks in first test/sessional.



4. The **re-appear exam/assessment** of all intermediate semesters (odd and even both) to be **held along with the regular exams/assessment on similar lines**. **The students have to apply for re-appear exams after downloading the relevant form from Institute website**. The guidelines for submission of re-appear form will be notified on the Institute website by Academic section.
5. The awards/results are to be submitted to Examination Cell in the same format and procedure as followed in the Institute by **30<sup>th</sup> June, 2020**.
6. The evaluation of 6<sup>th</sup> semester Internship/Industrial training/Project work to be conducted through skype or any other online tool and to be completed by **15<sup>th</sup> July, 2020**. The students are required to submit their final internship/project report online by **7<sup>th</sup> July, 2020** to their respective faculty mentors.

Further, the COVID-19 Lockdown period will be treated as work from home and is to be counted towards the stipulated 18 weeks' duration of the aforesaid internship/industrial training/ project work.

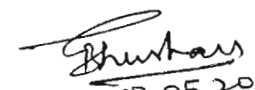
7. Comprehensive exam and Pre-synopsis of Ph.D students may be conducted online through any suitable mode by DRC/SRC of the concerned Department/School until the Institute opens and the classes resume in regular mode.

#### IV. Academic Calendar for Academic Year 2020-21

The odd semester of Academic Year 2020-21 may commence from August 01, 2020, except for fresh batch/students. However, the Academic calendar for the Academic Year 2020-21 will be notified later on after making a comprehensive assessment of the level of preparedness, residential status of the students, status of COVID-19 pandemic spread in their city / region / state and other factors; and after developing a plan before the resumption of session, strictly following the norms of "social distancing" and other required precautions, to avoid any eventuality arising due to COVID-19.

No other item was taken up in the meeting.

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

  
07.05.2020  
**Dean (Academic)**

**Director**  


## ANNEXURE I

### Award of Marks in Theory Subjects

Internal Assessment (X= 50 marks)					External Assessment (Y= 50 Marks)			Total (100 Marks)	Gra de
Sessi- onal I  (15)	Sessi- onal II  (15)	Atten- dance  (10)	Teacher's Assessment  (10)	Total Internal Marks  (50)	Y1  (25)	Y2  (25)	Total Externa l Marks  (50)		
				<b>X</b>	$Y1 = X/2$ (50% of total internal marks)	Marks based on the SGPA in previous semester $[(0.25) \times (9) \times$ <b>(SGPA)]</b>	<b>Y</b>  $=Y1+Y2$	<b>(X+Y)</b>	
<b>Illustration 1: Student (B.Tech. 8<sup>th</sup> semester having NO re-appear in previous semester)</b>									
10	10	9	9	38	$38/2 =$ 19	8.43 SGPA in 7 <sup>th</sup> semester  $0.25 \times 9 \times 8.43$ $= 18.97 = 19$	38	76	A
<b>Illustration 2: Student (B.Tech 8<sup>th</sup> semester having re-appear in previous semester)*</b>									
8	7	7	7	29	$29/2 =$ 14.5=15	Awards to be finalized after the compilation of result/SGPA of 7 <sup>th</sup> semester			

**\*In case a student has re-appear(s) in the previous semester, his/her result will be finalized only after the compilation of the result/SGPA of the previous semester.**



## ANNEXURE II

### Award of Marks in Practical Subjects

Internal Assessment (X= 60 marks)				External Assessment (Y= 40 Marks)			Total (100 Marks)	Gra de
Internal Evaluation (30)	Attend. (10)	Teacher's Assessment (20)	Total Internal Marks (60)	Y1 (20)	Y2 (20)	Total External Marks (40)		
			<b>X</b>	$Y1 = X/3$ (1/3 <sup>rd</sup> of total internal marks)	Marks based on the SGPA in previous semester $[(0.2) \times (9) \times (SGPA)]$	$Y = Y1 + Y2$	<b>X+Y</b>	
<b>Illustration 1: Student (B.Tech 8<sup>th</sup> semester having NO re-appear in previous semester)</b>								
20	9	14	43	$43/3 =$ $14.33$ $=14$	8.43 SGPA in 7 <sup>th</sup> Sem.  $(0.2) \times (9) \times (8.43) =$ $15.17 = 15$	29	72	B
<b>Illustration 2: Student (B.Tech 8<sup>th</sup> semester having re-appear in previous semester)*</b>								
18	8	13	39	$39/3 =$ $13$	Awards to be finalized after the compilation of result/SGPA of 7 <sup>th</sup> semester			

**\*In case a student has re-appear(s) in the previous semester, his/her result will be finalized only after the compilation of the result/SGPA of the previous semester.**



**S39.04 To consider and approve online Teaching Plan and Academic Calendar / Schedule for the odd semester of Academic Year 2020-2021 in view of COVID-19 Pandemic.**

The agenda for Examinations for odd semester of Academic Year 2019-20 and Academic Calendar / Schedule for the year 2020-2021 in view of COVID-19 Pandemic & MHRD letter notified vide F.No.33 – 6 / 2020 – TS.III dated 1<sup>st</sup> May, 2020 was taken up in 58<sup>th</sup> SCSA meeting held on May 07, 2020. SCSA approved the plan for examinations for odd semester of AY 2019-20 and decided to notify the academic calendar for AY 2020-21 later on.

In continuation with the above cited subject & communication received from Ministry of Home Affairs Order No. 40-3/2020-DM-I(A) dated 29 June, 2020 regarding Guidelines for Phased Re-opening (Unlock II), **it is mentioned under 1(i) that educational Institutes will remain closed till July 31, 2020 and online/distance learning shall continue to be permitted and shall be encouraged.** Considering the prevailing conditions of COVID-19, **it is proposed to start the odd semester of Academic Year 2020-2021 from August 17, 2020 in online mode for 2<sup>nd</sup> year onwards students of UG & PG and for 1<sup>st</sup> Semester students of MBA**, the admissions for which have already been completed. The schedule for 1<sup>st</sup> semester students of B.Tech./M.Tech./MCA/Ph.D., will be notified later after the completion of admission process. The academic calendar for odd semester of Academic Year 2020-2021 is proposed (**Annexure-I**).

**The online teaching mode will be followed as proposed below, till the Institute reopens and offline classes commence, as per the guidelines of Centre/State Government.**

1. The time table may be prepared for regular mode (physical teaching) of the classes. However, till the institute re-opens, the classes may be held in the online mode and institute time-table may be followed for engaging the classes as far as possible. In unprecedented situations, the faculty members may choose convenient time slot for online teaching, in consultation with

other faculty members and the students, depending upon the circumstances prevailing.

2. The online teaching may include Power Point Presentations (PPT's) to be shared with students. The faculty members may deliver online lectures of their courses using PPT's shared through platforms like Google Meet, Microsoft Team, Jio Meet, Skype, Webex etc. The advanced sharing of PPT's may lead to better understanding of the content by the students and help them raise queries in the online class.
3. PPT's of all experiments in each lab, with suitable illustrations and photographs of equipment/flow diagrams/line sketches etc. may be made available to the students. If possible, small videos of working of machines/carrying out of experiments may be shared with the students.
4. All the faculty members may provide list of links of course materials (theory and practical) of their courses, available on various platforms like NPTEL, SWAYAM, Coursera, YouTube etc. to supplement online teaching.
5. The attendance of students may be taken in any appropriate mode.
6. The students may be given assignments to be submitted online.
7. Mid semester examinations may be conducted in online mode till the Institute opens. Faculty members may opt for Subjective/Multiple choice based Question Paper/Open book/Quiz etc.
8. The modalities of end semester examinations for the odd semester of Academic Year 2020-21 may be finalized later on, taking into account the directions of the MHRD/Central/State Governments.

The Senate may consider and approve online Teaching Plan and Academic Calendar / Schedule for the odd semester of Academic Year 2020-2021.

**NATIONAL INSTITUTE OF TECHNOLOGY  
KURUKSHETRA**

No. Acad./Cal/20-21/

July \_\_, 2020

**ACADEMIC CALENDAR FOR ODD SEMESTER OF AY 2020-21**

All the teaching departments/schools of the Institute will observe the following generalized Academic Calendar during Odd Semester of Academic Year 2020-21

Sr. No.	Academic Activities	Dates
1.	Registration (on prescribed Performa only) <b>Except for 1<sup>st</sup> semester of UG/PG/Ph.D.</b>	03-08-2020 to 24-08-2020 <b>(Without late fee)</b> 25-08-2020 to 04-09-2020 <b>(With late fee of Rs 500/-)</b> <b>No Registration after 04-09-2020. Unregistered students will not be allowed to attend the classes.</b>
2.	Commencement of classes <b>(except 1<sup>st</sup> semester of B.Tech/M.Tech/MCA/Ph.D.)</b>	17-08-2020
3	Commencement of classes for 1 <sup>st</sup> semester of B.Tech/M.Tech/MCA/Ph.D.)*	As per admission schedule of JoSSA, CCMT & NIMCET
4.	Mid Semester Exam-I*	28-09-2020 to 30-09-2020
5.	Mid Semester Exam-II*	05-11-2020 to 07-11-2020
6.	Teaching closes*	26-11-2020
7.	Practical Examination begins*	01-12-2020
8.	End Semester Exam. begins*	10-12-2020
9.	End Semester Exam. concludes*	11-01-2021
10.	<b>Registration (Even Semester:2020-21)</b>	To be notified later
14.	<b>Commencement of Classes (Even Semester:2020-21)</b>	To be notified later

*\*For 1<sup>st</sup> semester students of B.Tech./M.Tech./MCA/Ph.D., schedule will be notified later*

**No. 40-3/2020-DM-I(A)**  
**Government of India**  
**Ministry of Home Affairs**

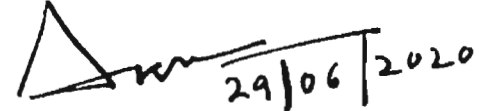
North Block, New Delhi-110001  
Dated 29 June , 2020

**ORDER**

Whereas, an Order of even number dated 30.05.2020 was issued for containment of COVID-19 in the country, for a period upto 30.06.2020;

Whereas, in exercise of the powers under section 6(2)(i) of the Disaster Management Act, 2005, National Disaster Management Authority (NDMA) has directed the undersigned to issue an order to re-open more activities in a calibrated manner, in areas outside the Containment Zones and to extend the lockdown in Containment Zones upto 31.07.2020;

Now therefore, in exercise of the powers, conferred under Section 10(2)(1) of the Disaster Management Act 2005, the undersigned hereby directs that guidelines on **Unlock 2**, as **annexed**, will be in force upto 31.07.2020.



29/06/2020

**Union Home Secretary**

**and, Chairman, National Executive Committee (NEC)**

**To:**

1. The Secretaries of Ministries/ Departments of Government of India
  2. The Chief Secretaries/Administrators of States/Union Territories
- (As per list attached)

**Copy to:**

- i. All Members of the National Executive Committee
- ii. Member Secretary, National Disaster Management Authority



## Guidelines for Phased Re-opening (Unlock 2)

[As per Ministry of Home Affairs Order No. 40-3/2020-DM-I (A) dated 29 June, 2020]

### 1. Activities permitted during Unlock 2 period outside Containment Zones

In areas outside Containment Zones, all activities will be permitted, except the following:

- (i) Schools, colleges, educational and coaching institutions will remain closed till 31 July, 2020. Online/ distance learning shall continue to be permitted and shall be encouraged.

Training institutions of the Central and State Governments will be allowed to function from 15 July, 2020, for which Standard Operating Procedure (SOP) will be issued by the Department of Personnel & Training (DoPT).

- (ii) International air travel of passengers, except as permitted by MHA.
- (iii) Metro Rail.
- (iv) Cinema halls, gymnasiums, swimming pools, entertainment parks, theatres, bars, auditoriums, assembly halls and similar places.
- (v) Social/ political/ sports/ entertainment/ academic/ cultural/ religious functions and other large congregations.

Dates for re-starting the above activities may be decided separately and necessary SOPs shall be issued for ensuring social distancing and to contain the spread of COVID-19.

**Domestic flights and passenger trains have already been allowed in a limited manner. Their operations will be further expanded in a calibrated manner.**

### 2. Night curfew

Movement of individuals shall remain strictly prohibited between 10.00 pm to 5.00 am throughout the country, except for essential activities, including operation of industrial units in multiple shifts, movement of persons and goods on National and State Highways, loading and unloading of cargo and travel of persons to their destinations after disembarking from buses, trains and airplanes. Local authorities shall issue orders, in the entire area of their jurisdiction, under appropriate provisions of law, such as under Section 144 of CrPC, and ensure strict compliance.

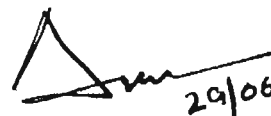
### 3. National Directives for COVID-19 Management

National Directives for COVID-19 Management, as specified in **Annexure I**, shall continue to be followed throughout the country.

### 4. Lockdown limited to Containment Zones

- (i) Lockdown shall continue to remain in force in the Containment Zones till 31 July, 2020.

1

  
29/06/2020

- (ii) Containment Zones will be demarcated by the District authorities after taking into consideration the guidelines of Ministry of Health & Family Welfare (MoHFW) with the objective of effectively breaking the chain of transmission. These Containment Zones will be notified on the websites by the respective District Collectors and by the States/ UTs and information will be shared with MOHFW.
- (iii) In the Containment Zones, only essential activities will be allowed. There shall be strict perimeter control to ensure that there is no movement of people in or out of these zones, except for medical emergencies and for maintaining supply of essential goods and services. In the Containment Zones, there shall be intensive contact tracing, house-to-house surveillance, and other clinical interventions, as required. Guidelines of MoHFW shall be effectively implemented for the above purpose.
- (iv) Activities in the Containment Zones shall be monitored strictly by the State/ UT authorities, and the guidelines relating to containment measures in these zones shall be strictly implemented.
- (v) States/ UTs may also identify Buffer Zones outside the Containment Zones, where new cases are more likely to occur. Within the buffer zones, restrictions as considered necessary may be put in place by the District authorities.

**5. States/ UTs, based on their assessment of the situation, may prohibit certain activities outside the Containment zones, or impose such restrictions as deemed necessary.**

However, there shall be no restriction on inter-State and intra-State movement of persons and goods including those for cross land-border trade under Treaties with neighbouring countries. No separate permission/ approval/ e-permit will be required for such movements.

**6. Movement of persons with SOPs**


Movement by passenger trains and *Shramik* special trains; domestic passenger air travel; movement of Indian Nationals stranded outside the country and of specified persons to travel abroad; evacuation of foreign nationals; and sign-on and sign-off of Indian seafarers will continue to be regulated as per SOPs issued.

**7. Protection of vulnerable persons**

Persons above 65 years of age, persons with co-morbidities, pregnant women, and children below the age of 10 years are advised to stay at home, except for essential and health purposes.

**8. Use of *Aarogya Setu***

- (i) *Aarogya Setu* enables early identification of potential risk of infection, and thus acts as a shield for individuals and the community.
- (ii) With a view to ensuring safety in offices and work places, employers on best effort basis should ensure that *Aarogya Setu* is installed by all employees having compatible mobile phones.

  
29/06/2020

(iii) District authorities may advise individuals to install the *Aarogya Setu* application on compatible mobile phones and regularly update their health status on the app. This will facilitate timely provision of medical attention to those individuals who are at risk.

**9. Strict enforcement of the guidelines**

(i) State/ UT Governments shall not dilute these guidelines issued under the Disaster Management Act, 2005, in any manner.

(ii) All the District Magistrates shall strictly enforce the above measures.

**10. Penal provisions**

Any person violating these measures will be liable to be proceeded against as per the provisions of Section 51 to 60 of the Disaster Management Act, 2005, besides legal action under Section 188 of the IPC, and other legal provisions as applicable. Extracts of these penal provisions are at **Annexure II**.

  
29/06/2020

**Union Home Secretary  
and, Chairman, National Executive Committee**

**S 39.05**      **To note the approval of the Chairman, Senate regarding minor changes in M.Tech. (Control System) and B.Tech. course in Electrical Engineering.**

On the recommendations of DAC, Electrical Engg. Deptt., the Chairman, Senate has approved the minor changes in M.Tech. (Control System) and B.Tech. (Electrical). The approval of the Chairman, Senate is enclosed as Annexure S 39.05 from page 27 to 30.


The Senate may note the approval of the Chairman, Senate.

NATIONAL INSTITUTE OF TECHNOLOGY  
KURUKSHETRA  
(OFFICE OF DEAN ACADEMIC)

No./Acad/20/299

Date: 04.06.2020

This is with reference to minutes of DAC sent vide letter No. EED/DAC/2020/384 dated 22.05.2020, the Competent Authority has approved the proposed Item no. II and III(A & B).

  
4.6.2020  
Dean (Academic)

HOD (Electrical)

Copy to:

1. Dean (FW)
2. Co-ordinator TEQIP-III
3. AR to Director for kind information of the Hon'ble Director.

PUC are the recommendations of DAC of Electrical Engineering Department sent vide letter no. EED/DAC/2020/384 dated 22.05.2020.

- Item I** To permit comprehensive exam of Ph.D. candidates online under video shoot using online tools so that comprehensive exam may conducted online.
- Item II** To permit shifting of Reliability Engineering from odd semester to even semester and swapping of Mechatronics and Reliability Engineering in M.Tech. (Electrical (CS)) as proposed below:

Existing	Proposed
MEE1E37 / MEE1O73 Reliability Engineering*	MEE1E51 / MEE1O81 Mechatronics*
MEE1E44 / MEE1O78 Mechatronics*	MEE1E48 / MEE1O82 Reliability Engineering*

- Item III** Subject of Signal processing (elective) is proposed in 7<sup>th</sup> semester B.Tech. (Electrical) with course code EEPE 41D with 3 credits as per syllabus in Annexure-II.

Submitted for kind consideration and approval of Chairman Senate.

*Shankar*  
3.6.2020  
Dean (Academic)

Registrar Incharge

The above proposal are necessary to be carried out before the start of next sem. In view of this, the proposals may be approved pl. If approved, it will be reported to next senate meeting ~~pl.~~ pl.

Director / Chairman Senate

*Donnel*  
3/6/20

Director / chairman Senate

*Dele*  
3/6/20

*R!*

*Donnel*  
4/6/20

Dean (Acad)

*g*  
4.6.2020

Registrar Office  
Dairy No... 781  
Dt... 4.6.2020

DEPARTMENT OF ELECTRICAL ENGINEERING  
NATIONAL INSTITUTE OF TECHNOLOGY  
KURUKSHETRA - 136 119

No. EED/DAC/2020/384

Dated: 22.05.2020

Minutes of Departmental Affairs Committee

A meeting of the Departmental Affairs Committee (DAC) of Electrical Engineering department was held on dated 19.05.2020 at 11:55 am. The following members were present:

1. Dr. A. Swarp
2. Dr. K.S. Sandhu
3. Dr. (Mrs.) Lillie Dewan
4. Dr. G.L. Pahuja
5. Dr. (Mrs.) Ratna Dahiya
6. Dr. L.M. Saini (In Chair)
7. Dr. Ashwani Kumar Sharma
8. Dr. (Mrs.) yoti Ohri
9. Dr. J.S. Lather
10. Dr. Sathans
11. Dr. Yashpal
12. Dr. (Mrs.) Rupanshi Batra
13. Dr. (Mrs.) Monika Mittal
14. Dr. Atma Ram Gupta
15. Dr. Modi Pandu Ranga Prasad

The faculty member Dr. R.S. Bhatia did not attend the meeting. The Head of the department welcomed the members before taking up the agenda items.

- Item I To consider and approve Names of Coordinators for various theory, practical, Seminar, Comprehensive, Major Project, GFPA subjects of B. Tech./M. Tech./Ph.D. courses.
- DAC approved list of course coordinators/paper-setter for B.Tech & M.Tech for the session May/June-2020 (Even & Odd Semester) (No. of pages 07) placed as Annexure-I. The minutes of this item was confirmed by all members of DAC present in the meeting.

Item II To devise method to conduct written comprehensive exam of Ph. D. students.  
DAC proposed that comprehensive written exam will be taken online under video shoot using online tools. Honourable Chairman, Senate is requested to approve this so that Comprehensive exam of Ph. D. candidates may be conducted online.

Item III Any other item with the permission of Chair.  
(A). Dr. G.L. Pahuja proposed that Reliability Engineering be shifted from odd semester to even semester as it can be offered as open elective in M. Tech. (Electrical (CS)). M.Tech CS coordinator suggested that to keep the balance in number of electives offered to students, swapping of the subjects be done and accordingly Mechatronics is swapped with Reliability Engineering as per table below:

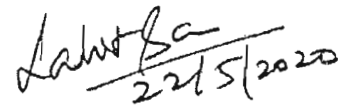
Existing	Proposed
MEE1E37/ MEE1O73 Reliability Engineering*	MEE1E51/MEE1O81 Mechatronics*
MEE1E44/ MEE1O78 Mechatronics*	MEE1E48/MEE1O82 Reliability Engineering*

The above minutes of this item may be approved by Chairman, Senate under minor changes category, so that it may be implemented from academic session 2020-21.

(B). Under any other item, a subject of Signal processing (Elective) is proposed in 7th Semester B. Tech. (Electrical) with course code EEPE 41D (L:T:P::3:0:0) with 3.0 credits as per syllabus in Annexure-II.

The above minutes of this item may be approved by Chairman, Senate under minor changes category, so that it may be implemented from academic session 2020-21.

(C). Under any other item, DAC considered and approved a STC on Smart Grid: Operation & planning with Renewable Energy Sources and FACTS' (Annexure-III) from offline mode to online mode. Course Convener: Ashwani Kumar Sharma; Course Coordinators: Atma Ram Gupta, Amit Kumar

  
22/5/2020  
(Dr. L.M. Saini)

Head of the Department

All DAC Members

Copy to:

1. Dean (FW)
2. Dean (Academic)
3. Co-ordinator TEQIP-III
4. Sr. Secy. To Director for kind information of the Hon'ble Director.

30



**S 39.06 To consider and approve minor changes in scheme of B.Tech. Electronics & Communication Engineering**

The DAC of Electronics & Communication Engineering Department has recommended minor changes in scheme of B.Tech. Electronics & Communication Engineering vide letter No. ECE/20/ dated 20-01-2020. There is swapping of two subjects of 4<sup>th</sup> & 5<sup>th</sup> semesters and the total credits remain unchanged.

The relevant documents are enclosed as Annexure S 39.06 from page \_\_\_32\_\_\_ to \_\_\_34\_\_\_.

The Senate may consider and approve.

**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING  
NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA**

No. ECE/20/

dated: 20.01.2020

A meeting of the DAC was held on 13.01.2020 at 04:35 pm in the conference room of ECE department.

Following members were present:

1. Dr. N.P. Singh, Assoc. Professor	In chair
2. Prof. B. J. Singh, Prof.	Member
3. Prof. R.K. Sharma, Prof.	Member
4. Prof. O.P. Sahu, Prof.	Member
5. Prof. Umesh Ghanekar, Prof.	Member
6. Prof. Rajoo Pandey, Prof.	Member
7. Dr. Vrinda Gupta, Assoc. Prof.	Member
8. Dr. Rajender Kumar, Asst. Prof.	Member
9. Dr. Poonam Jindal, Asst. Prof.	Member

Dr. Vikas Mittal could not attend the meeting. (Being on leave).

Agenda:

1 To conduct the Skill/Trade Test for the promotion of Non- Teaching Staff Technical Cadre (Ref. Notification No. Gen.-I/3772/7060) dated 16.12.2019.

DAC decided that Skill/Trade test will be conducted through committees.

2 To consider a minor revision in the scheme of B.Tech. ECE.

DAC deliberated on the agenda item and decided that ECPC- 41 Microprocessor & microcontroller & ECLR-42 Embeded System Lab be shifted from 4<sup>th</sup> sem to 5<sup>th</sup>sem and ECPC-53 Digital Communication & ECLR -50 Digital Communication Lab be shifted from 5<sup>th</sup> sem to 4<sup>th</sup> sem.

There is no change in the total credit. The modification in the scheme shall be applicable with effect from session 2020-21, to the students of 2019 batch and onwards.

*(Signature)*  
21/01/2020  
(N.P. Singh)  
Chairman, DAC

Dean Acad.

For considering it as an agenda item in the next Senate meeting. Existing and proposed scheme of 4<sup>th</sup> & 5<sup>th</sup> semesters ECE are enclosed.

*Agenda item 2*  
Pl. Consider this case as an agenda item in Senate meeting which is scheduled to be held on 23/07/2020.

DT

*Ummi*  
15/07/20

## Existing Scheme of ECE 4<sup>th</sup> and 5<sup>th</sup> semesters

### Semester IV

Code	Course	L	T	P	Credits
MAIR13	Mathematics-III				
ECPC40	Analog Electronics	3	1	0	4
ECPC41	Microprocessor & Microcontroller	3	1	0	4
ECPC42	Control System Engineering	3	0	0	3
ECPExx	...	3	1	0	4
ECPExx	...	3	0	0	3
ECLR40	Electronics-II Lab	3	0	0	3
ECLR41	Communication Lab	0	0	2	1
ECLR42	Embedded systems Lab	0	0	2	1
ECLR43	Object Oriented Programming Lab	0	0	2	1
	Total	18	3	8	25

- A. (1) ECPE40 Object Oriented Programming (2) ECPE41 Network Analysis and Synthesis  
 B. (1) ECPE42 Computer Architecture (2) ECPE43 Digital Design using Verilog

### Semester V

Code	Course	L	T	P	Credits
ECPC50	Information Theory and Coding	3	1	0	4
ECPC51	Antenna & Wave Propagation	3	1	0	4
ECPC52	Digital Signal Processing	3	1	0	4
ECPC53	Digital Communication	3	1	0	4
ECPExx		3	1	0	4
ECOExx		3	0	0	3
ECLR50	Digital Communication Lab	3	0	0	3
ECLR51	DSP Lab	0	0	2	1
ECLR52	Transmission Lines & Antenna Lab	0	0	2	1
	Total	18	4	7	25

- A. (1) ECPE50 Data Structure (2) ECPE51 Computer Networks  
 (3) ECPE52 Neuro-Fuzzy Systems  
 B. (1) ECPE53 Analog and Mixed Signal Design (2) ECPE 54 Embedded System Design  
 Open Electives (1) ECOE50 Electronics Engg. (2) ECOE51 Signal Analysis

Proposed Scheme of ECE 4<sup>th</sup> and 5<sup>th</sup> semesters as passed in the DAC meeting

Semester IV

Code	Course	L	T	P	Credits
MAIR13	Mathematics-III	3	1	0	4
ECPC40	Analog Electronics	3	1	0	4
ECPC42	Control System Engineering	3	1	0	4
ECPC44	Digital Communication	3	1	0	4
ECPExx	...	3	0	0	3
ECPExx	...	3	0	0	3
ECLR40	Electronics-II Lab	0	0	2	1
ECLR41	Communication Lab	0	0	2	1
ECLR45	Digital Communication Lab	0	0	2	1
ECLR43	Object Oriented Programming Lab	0	0	2	1
Total		18	4	8	26

- A. (1) ECPE40 Object Oriented Programming(2) ECPE41 Network Analysis and Synthesis  
 B. (1) ECPE42 Computer Architecture (2) ECPE43 Digital Design using Verilog

Semester V

Code	Course	L	T	P	Credits
ECPC50	Information Theory and Coding	3	1	0	4
ECPC51	Antenna & Wave Propagation	3	1	0	4
ECPC52	Digital Signal Processing	3	1	0	4
ECPC55	Microprocessor & Microcontroller	3	0	0	3
ECPExx	...	3	0	0	3
ECOExx	...	3	0	0	3
ECLR51	DSP Lab	0	0	2	1
ECLR52	Transmission Lines & Antenna Lab	0	0	3	1
ECLR53	Embedded systems Lab	0	0	2	1
Total		18	4	7	24

- A. (1) ECPE50 Data Structure (2) ECPE51 Computer Networks  
 (3) ECPE52 Neuro-Fuzzy Systems  
 B.(1) ECPE53 Analog and Mixed Signal Design (2) ECPE 54 Embedded System Design  
 Open Electives (1) ECOE50 Electronics Engg. (2) ECOE51 Signal Analysis