

SELF ASSESSMENT REPORT (SAR)

For

**Accreditation of
Bachelor of Technology (B.Tech.) in
Electrical Engineering**

By

National Board of Accreditation

NBCC Place, 4th Floor East Tower, Bhisham Pitamah
Marg, Pragati Vihar New Delhi 110003
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**ELECTRICAL ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR
Hazratbal, Srinagar – 190006, J&K (India)**

SAR Contents

Serial Code & Link to the Item	Item	Page No.
PART A	Institutional Information	2-6
PART B	Criteria Summary	7
	Program Level Criteria	
1	Vision, Mission and Program Educational Objectives	9-14
2	Program Curriculum and Teaching-Learning Processes	15-90
3	Course Outcomes and Program Outcomes	91-133
4	Students' Performance	134-140
5	Faculty Information and Contributions	141-151
6	Facilities and Technical Support	152-165
7	Continuous Improvement	166-177
	Institute Level Criteria	
8	First Year Academics	178-198
9	Student Support Systems	199-250
10	Governance, Institutional Support, and Financial Resources	251-382
PART C	Declaration by the Institution	383

PART A: Institutional Information

1. Name and Address of the Institution: National Institute of Technology Srinagar
(NIT Srinagar)

Address:-	City:- Srinagar
State:- Jammu & Kashmir	Pin Code:- 190006
Website:- www.nitsri.ac.in	E-mail:- admin_csc@nitsri.ac.in
STD Code:- 0194	Phone No:- 2422032
Fax STD Code:- 0194	Fax:- 242047

2. Name and Address of the Affiliating University: None

3. Year of the establishment of the Institution: 1960

4. Type of the Institution: Institute of National Importance

5. Ownership Status: Central Government

Provide Details: Appendix 1 of part A

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of the Institution(s)	Year of Establishment	Programs of Study	Location

7. Details of all the programs being offered by the institution under consideration:

S. No	Programme Name	Name of Department	Year of Start	Intake	Increase/Decrease In Intake, If any	Year of increase/Decrease	AICTE Approval	Accreditation Status
1	B.Tech.Chemical Engineering	Chemical Engineering	1963	27	77	2009	Senate	Accredited by NBA F. NO NBA/ACCR/106/2002 May 19 2009
2	M.Tech.Chemical Engineering		2015	18				
3	Ph.D., Chemical Engineering		2008	05	13	2015		

4	B.Tech. Civil Engineering	Civil Engineering	1960	50	123	2009	Accredited by NBA F. NO NBA/ ACCR/106/20 02 May 19 2009
5	M.Tech. Transportation,		2014	18			
6	M. Tech. .Structure,		2004	25			
7	M.Tech., Geotechnical		2014	17			
8	M. Tech. Water resource Engineering		1986	15			
9	Ph.D., Civil Engineering		2006	02	11	2015	
10	B.Tech. Computer science Engineering	Computer science Engineering	2007	62			
11	Ph.D., Computer science Engineering		2010	01	04	2015	
12	B.Tech., Electrical Engineering	Electrical Engineering	1960	50	77	2009	Accredited by NBA F. NO NBA/ ACCR/106/20 02 May 19 2009
13	M.Tech. Electrical power and energy system		2013	26			
14	Ph.D., Electrical Engineering		2004	01	18	2015	
15	B.Tech., Electronics and Communication Engineering	Electronics and Communication Engineering	1984	50	77	2009	Accredited by NBA F. NO NBA/ ACCR/106/20 02 May 19

16	M.Tech., Communication and information Technology		2004	25				2009
17	M.Tech. Microelectronics		2015	13				
18	Ph.D., Electronics and Communication Engineering		2005	01	14	2015		
19	B.Tech., Mechanical Engineering	Mechanical Engineering	1960	50	77	2009		Accredited by NBA F. NO NBA/ ACCR/106/20 02 May 19 2009
20	M.Tech., Mechanical system design		2004	25				
21	M.Tech., Industrial tribology and maintenance management		2013	26				
22	Ph.D., Mechanical Engineering		2008	10	28	2015		
23	B.Tech., Metallurgical and Materials Engineering	Metallurgical and Materials Engineering	1960	15	77	2009		
24	Ph.D., Metallurgical and Materials Engineering		2008	05	09	2015		
25	B.Tech., Information Technology	Information Technology	2007	62				
26	Ph.D., Information Technology		2018	06				

27	MSC, Physics	Physics	2015	25				
28	Ph.D., Physics		2004	02	14	2015		
29	Ph.D., Chemistry	Chemistry	2005	01	11	2015		
30	Ph.D., Humanities	Humanities	2004	02	04	2015		
31	Ph.D., Math's	Math's	2006	02	8	2015		

8. Programs to be considered for Accreditation vide this application

S. No.	Program Name
1	Chemical Engineering
2	Civil Engineering
3	Electrical Engineering
4	Electronics and Communication Engineering,
5	Mechanical Engineering

9. A total number of employees:

A. Regular Employees (Faculty and Staff):

Items		2017-18		2016-17		2015-16	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	54	54	54	54	54	54
	F	16	16	16	16	16	16
Faculty in Maths, Science & Humanities teaching in engineering Programs	M	11	11	11	11	11	11
	F	5	5	5	5	5	5
Non-teaching staff	M	227	227	227	222	227	227
	F	26	26	26	26	26	26

B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A):

Items		2017-18		2016-17		2015-16	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	40	40	40	44	40	37
	F	22	22	22	18	22	19
Faculty in Maths, Science & Humanities teaching in engineering	M	9	9	9	10	9	3
	F	3	3	3	1	3	3

Programs							
Non-teaching staff	M	54	54	54	52	54	56
	F	11	11	11	9	11	7

10. Total number of Engineering Students

Item	2017-18	2016-17	2015-16
Total no. of boys	2383	2185	2280
Total no. of girls	282	292	347
Total no. of students	2665	2477	2623

11. Vision of the Institution:

To establish a unique identity of a pioneer technical Institute for NIT Srinagar by developing a high-quality technical manpower and technological resources that aim at the economic and social development of the nation as a whole and the region, in particular, keeping in view global challenges.

12. Mission of the Institution:

- (1) The broad mission of NIT Srinagar is to create a strong and transformative technical educational environment in which fresh ideas, moral principles, research and excellence nurture with international standards.
- (2) Technically educated and broadly talented engineers, future innovators and entrepreneurs, graduate with understanding the needs and the problems of the industry, the society, the state, and the nation.
- (3) We promise to inculcate the highest degree of confidence, professionalism, academic excellence and engineering ethics in budding engineers.

13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution:-	
Name:- Dr. Rakesh Sehgal	Designation:- Director
Status of Appointment:- By MHRD	
Contact details of Head of the Institution:-	
STD Code:- 0194	Telephone No:- 0782677
Mobile:- 09419433770, 9418058442	E-mail:- director@nitsri.net
Fax STD Code:- 0194	Fax No:- 242047

NBA coordinator	
Name:- Dr. G. A. Harmain	Designation:- Professor
STD Code:- 0194	Telephone No:- 0782677
Mobile:- 9419018804	E-mail:- gharmain@nitsri.net

Appendix 1 of part A

केवल कुमार शर्मा, भा.प्र.से.
K. K. Sharma, I.A.S.
सचिव
Secretary



भारत सरकार
मानव संसाधन विकास मंत्रालय
उच्चतर शिक्षा विभाग
Government of India
Ministry of Human Resource Development
Department of Higher Education
D.O. No. 16-5/2017-TS.III
5th June, 2017

Dear

As you are aware, the National Institutes of Technology (NITs) are Centrally Funded Technical Institutes (CFTIs) of National Importance set up by an act of Parliament, National Institute of Technology, Science Education and Research (NITSER) Act, 2007. Therefore, NITs do not require any approval of All India Council for Technical Education (AICTE) and also National Board of Accreditation (NBA) accreditation is not mandatory for such Institutions.

2. NIT, Srinagar has informed the Ministry of HRD that students who are studying in above NIT and belong to state of Rajasthan have been denied registration for scholarship on the portal of Department of Social Justice and Empowerment, Rajasthan. It has been mentioned that Department of Social Justice and Empowerment has been insisting that NIT, Srinagar should get accreditation beyond 2016-17.

3. As mentioned above, the NIT Srinagar is an Institution of National Importance. Therefore, accreditation from NBA/NAAC/AICTE is not mandatory for it.

4. In view of the above, it is requested to kindly look into the matter and direct concerned official(s) to allow registration of students of your state for enabling them to get scholarship.

Yours sincerely,
-sd-
(K. K. Sharma)

Shri Om Prakash Meena,
Chief Secretary,
Govt. of Rajasthan,
Government Secretariat,
Jaipur - 302 005

Copy to:

Prof. A. R. Dar, Director, National Institute of Technology Srinagar, Hazratbal, Kashmir - 190006 (J&K)

cc
He Scholarship
K. K. Sharma
15/6/17

K. K. Sharma
(K. K. Sharma)
02/06/17
PA

128-C, SHASTRI BHAVAN, NEW DELHI - 110 015
TEI : 23386451, 23382698, FAX : 23385807, E-mail : secy.dhe@nic.in

F.No.13-12/2003-TS.III
Government of India
Ministry of Human Resource Development
Department of Secondary & Higher Education

New Delhi, the August 11, 2003

To
The Director,
National Institute of Technology,
(Formerly known as Regional Engineering College)
Srinagar - 190 006 (J & K).

Subject: Conversion of Regional Engineering College, Srinagar into National Institute of Technology, Srinagar with deemed University status- regarding.

Sir,

I am directed to forward herewith a copy of Notification No.F.9-17/2003-U.3 dated 07.08.2003 relating to conversion of Regional Engineering College, Srinagar into National Institute of Technology, Srinagar with Deemed University status for your record and further necessary action.

Yours faithfully,
(B.K.Ray)
Desk Officer
Tel: 23070177
FAX: 23074094

Encl: As above.

Copy to: The Director of all National Institutes of Technology.

Handwritten notes and signatures:
R.I. For Mr. M.
AC 25/8/2003
D.O. 28/8/2003
B.K. Ray
K.C. S.

(B.K.Ray)
Desk Officer

PART B: Criteria Summary

Name of the program: **Mechanical Engineering**

Criteria No.	Criteria	Mark/Weightage
	Program Level Criteria	
1	Vision, Mission and Program Educational Objectives	50
2	Program Curriculum and Teaching-Learning Processes	100
3	Course Outcomes and Program Outcomes	175
4	Students' Performance	100
5	Faculty Information and Contributions	20
6	Facilities and Technical Support	80
7	Continuous Improvement	75
	Institute Level Criteria	
8	First Year Academics	50
9	Student Support Systems	50
10	Governance, Institutional Support, and Financial Resources	120
	Total	1000

PART B: Program Level Criteria

CRITERION 1	Vision, Mission and Program Educational Objectives	50
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1.1 State the Vision and Mission of the Department and Institute (5)

Vision of the Institution:

To establish a unique identity of a pioneer technical Institute for NIT Srinagar by developing a high-quality technical manpower and technological resources that aim at the economic and social development of the nation as a whole and the region, in particular, keeping in view global challenges.

Mission of the Institution:

- (1) The broad mission of NIT Srinagar is to create a strong and transformative technical Educational environment in which fresh ideas, moral principles, research and excellence Nurture with international standards.
- (2) Technically educated and broadly talented engineers, future innovators and Entrepreneurs, graduate with understanding the needs and the problems of the industry, the society, the state, and the nation.
- (3) We promise to inculcate the highest degree of confidence, professionalism, and academic Excellence and engineering ethics in budding engineers.

DEPARTMENT

ABSTRACT

Ever since its establishment, the department of electrical engineering has produced scientists and technocrats of high caliber. In order to ascertain these achievements, a committee was established in the supervision of Head of the department, to develop vision, mission and program educational objectives for a span of next 10 years. It compromises of analysis yearly achievements for all previous years. This assessment is used for interdepartmental achievements/ progress on annual basis.

To complete more result oriented tasks, the committee carried out thorough discussions in order to understand the gaps in the present scenario ad the desirable future of the department as well as an institute.

VISION OF DEPARTMENT

The Department of Electrical Engineering aims to be a frontrunner in producing globally competent technocrats who can set a benchmark in innovation and research to contribute in nation building by making a demonstrable environmental, social and economic impact.

MISSION OF DEPARTMENT

- M1.** To create technocrats by imparting quality education to meet industrial and societal needs.
- M2.** To provide a cordial environment that attracts and develops talent for excellence in research, innovation, and leadership.
- M3.** To inspire students to become responsible citizens and inculcate value based, socially committed professional ethics to cause of holistic development.
- M4.** To enable sustainable and cost-effective innovations, showcasing the importance of green energy technology with a focus on energy efficiency.
- M5.** To bridge the gap between academia and industries by framing appropriate curricula and syllabi.

1.2 State the Program Educational Objectives (PEOs) (5)

Program Educational Objectives

- PEO1.** To imbibe analytical and professional skills in students to succeed in diverse fields.
- PEO2.** To create enthusiasts to pursue advanced education supplementing their career growth.
- PEO3.** To develop the necessary skill set for industries in students by imparting state of art technology in various areas of electrical engineering.
- PEO4.** To promote the culture of problem-solving and design skills for lifelong learning.

1.3 Indicate where the Vision, Mission, and PEOs are published and disseminated among stakeholders (15)

Display and dissemination of vision and mission has to be at following locations through banners and display board

1. Head of the Department office
2. Departmental corridor

3. Classroom, Lab, Laboratories
4. Departmental brochures
5. Institute website /departmental web page

The display and dissemination of PEOS is at following locations

1. Departmental Brochures
2. Departmental notice board
3. Institute website/departmental web page
4. Classroom and laboratories

List of stakeholders of the program

1. Students
2. Parents and society
3. Industries
4. Power utility like PDD, PGCIL, PDC etc.
5. Research organization
6. Academia

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)

Process for defining the vision and mission of the department

1. Need for industry
2. Requirement of academia
3. Aspiration of student's community
4. The expectation of the society
5. Policies of government
6. Vision and mission of the Institute

Process for establishing PEOs

1. Academic activities/lectures, lab experiments, projects, seminars, industrial visit and deputation for conferences/ workshops
2. Monthly departmental meeting
3. Mentor meeting for quality improvement
4. Participation of students committee and its feedback
5. Peer review of the departmental academic activity

Achievements of Program education objectives

- i. The broad curricula are based on making students understand basic electrical engineering And its application through the subjects like principles of electrical engineering. Network theory, electrical machine, control system, electrical measurement, power system, power electronics, microprocessor etc.
- ii. The students are induced to engage in analytical thinking by setting challenging questions in various examinations through one midterm and one final term examinations
- iii. During the final year, students are required to undertake projects based on Software/Hardware.
- iv. Assignments, quizzes, and seminars contribute towards the development of analytical skills.
- v. In addition to regular practical sessions, the students benefit from experts talk, guest lectures and industrial visits
- vi. Industry Institute interaction helps to built confidence in problem-solving abilities
- vii. To improve sensitivity and building awareness among the students toward environmental issues, subjects like green chemistry, renewable energy source, and energy conservation and audit have been added to the curriculum

How administrative system helps in ensuring the achievement of PEOs

- i. The students class committee meet twice in each semester and their views are incorporated in the curriculum
- ii. The students class committee meeting results in pointing out deficiencies in the teaching and learning process, which helps in improving the overall quality of manpower being produce
- iii. Underperforming students are identified by the above process, towards whom special attention is directed by various mechanisms like student's mentor, faculty mentor, and faculty advisor
- iv. The curriculum improvements, modification, and additions are governed by a Board of studies
- v. Academic modification/alternation is approved by Senate
- vi. Board of studies is held once in a semester and all the faculty members contributing to the curriculum development along with experts from reputed institute/ universities
- vii. The scheme of exam and award of degree followed as per rules by are set by the dean of academics and approved by Senate
- viii. Major administrative policies implemented by the department as per the directives of BOG

Assessment tools

- i. Feedback from academic committee and deliberation in BOS
- ii. Guidelines and approval from Senate as for and when obtained
- iii. The feedback from training and placement once a year
- iv. The feedback from students class committee, four times per year
- v. The suggestion received time to time from industrial experts
- vi. The continuous academic quality assessment is carried out through a peer(external review process once a year

Assessment Process

- i. Every semester by contacting the scheduled meeting of the class committee academic committee and administrative committee
- ii. Random sample assessment by inviting experts and section of stakeholders
- iii. Monthly departmental meeting

1.5 Establish consistency of PEOs with Mission of the Department (10)

MAPPING

Program Educational Objective	Mission				
	Quality education M1	Sound foundation M2	Constructive environment M3	Green energy M4	Framing curricula M5
1. Analytical and professional skills (PEO1)	3	3	2	2	2
2. Advanced Education (PEO2)	3	3	2	3	1
3. Industrial exposure (PEO3)	3	2	2	3	2
4. Problem-solving and design skills (PEO4)	2	3	2	3	2

1: Slightly related

2: Moderately related

3: Substantially related

Justification:

J1:

1. PEO1 – M1: For developing analytical and professional skills, quality education is a must.
2. PEO1 – M2: For the implementation of concepts in practice.
3. PEO1 – M3: For encouraging the Bilateral flow of ideas and knowledge.
4. PEO1 – M4: Persons contributing to renewable energy are usually found to branch out early in their career.
5. PEO1 – M5: Both are invariably dependent

J2:

1. PEO2 – M1: Quality education is a pre-requisite for higher education.
2. PEO2 – M2: Sound foundation promotes advance education.
3. PEO2 – M3: Constructive environment promotes higher education.
4. PEO2 – M4: Research in clean energy inspires to pursue higher education.
5. PEO2 – M5: Well defined curricula help in pursuing higher education.

J3:

1. PEO3 – M1: Quality Education is the backbone of all industrial activities.
2. PEO3 – M2: Sound foundation of concepts is the base for progressive industries.
3. PEO3 – M3: Student in a constructive environment translates into an excellent technocrat
4. PEO3 – M4: Green energy is a trending field for engineers.
5. PEO3 – M5: Curricula should be developed to cater to the need of industries.

J4:

1. PEO4 – M1: Quality Education leads towards better decision making and problem-solving
2. PEO4 – M2: Sound foundation is key to develop design skills
3. PEO4 – M3: Problem-solving becomes easier in an interactive environment.
4. PEO4 – M4: For pollution free tomorrow, problem-solving in non-conventional areas is a must.
5. PEO5 – M5: Various techniques and practices for design should be included in curricula.

Criterion 2

CRITERION 2	Program Curriculum and Teaching-Learning Processes	100
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2.1. Program Curriculum (30)

2.1.1 State the Process for Designing the Program Curriculum (10):

The program curriculum is designed based on the broad guidelines of the institute keeping in view other NITs, MHRD directives and program specific criteria to meet the requirements of POs and PEOs of the Department. Industry persons, alumni, and students are consulted while the curriculum is being designed. Technological developments constitute important criteria while designing the program curriculum. The faculty members design the course content to meet out the requirement of CO's. The individual courses are discussed specifically for their outcomes in faculty board meetings and Department Undergraduate Committee (DUGC) meetings. The DUGC discusses the content of the curriculum threadbare. The committee points out the deficiencies of the curriculum keeping in view the various inputs and returns the same to the faculty for review. Once the DUGC is satisfied with the contents of the curriculum, it is submitted to the Program Assessment Committee (PAC). The PAC evaluates the curriculum in terms of POs, PEOs, and various inputs. The PAC submits the same to the Departmental Assessment Board (DAB), chaired by the HOD. Again the curriculum is subjected to evaluation so that the contents fulfill all the statutory requirements, else it is again returned for review. Finally, the program curriculum is submitted to the institute senate, which is the highest academic body of the institute. The Senate of the NIT Srinagar is chaired by the director, NIT Srinagar. The Senate comprises of members drawn from the various departments of the institute. In addition to the institute members, it has members from outside the institute. At least one member is alumni and others from other institutes of repute. The presence of outsiders and alumni ensures that the curriculum is designed keeping in view the inputs of alumni and faculty from another institute. The process for designing the program curriculum is illustrated in Figure 2.1

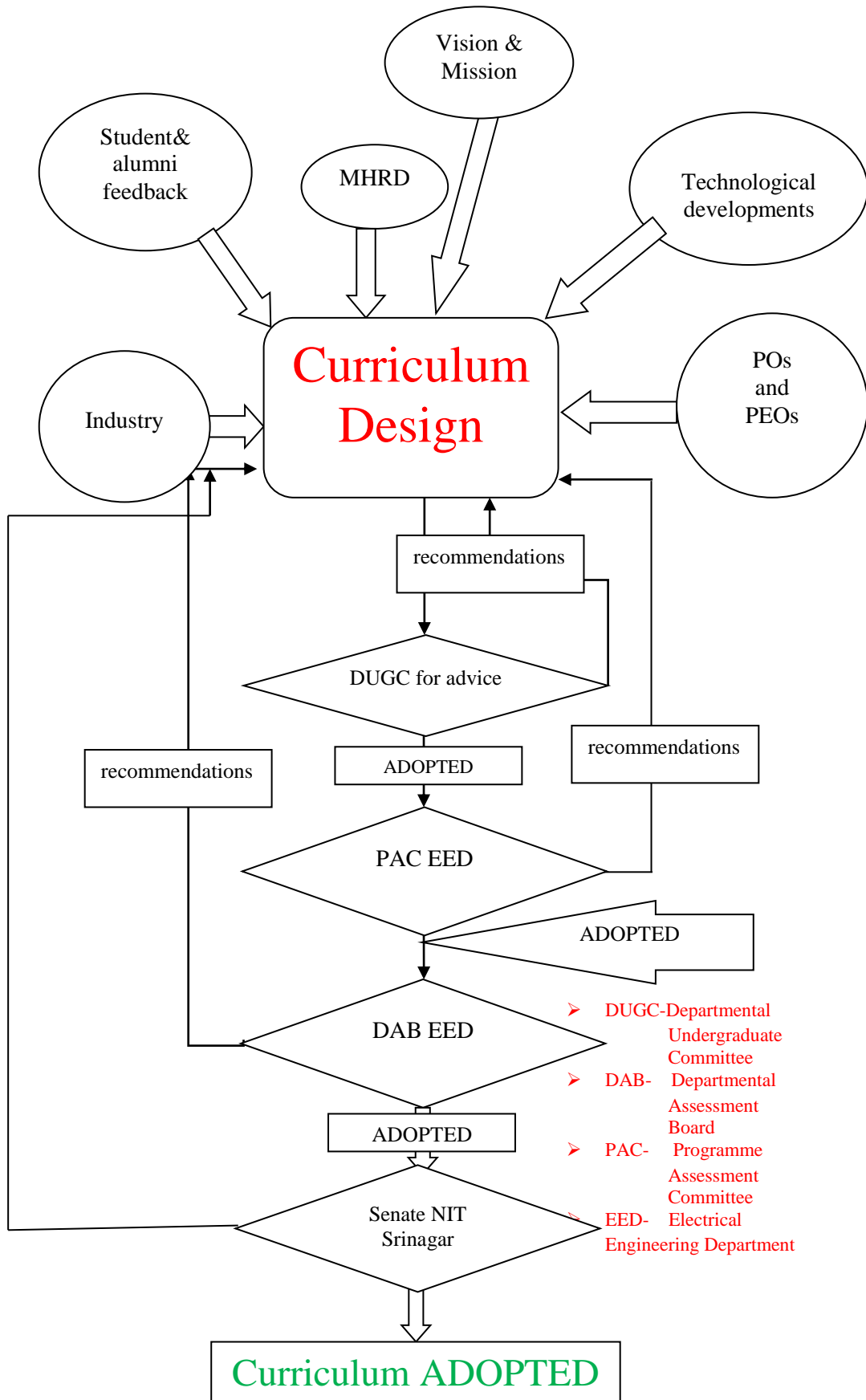


Figure 2.1: Process of designing the programme curriculum

2.1.2 Structure of the Curriculum (5)

Course Code	Course Title	Total Number of contact hours				Credits
		Lecture (L)	Tutorial (T)	Practical(P)	Total Hours	
1st Semester						
PHY-101	Physics	3	0	0	3	3
PHY-102 P	Physics(Lab)	0	0	2	2	1
CHM-101	Chemistry	4	0	0	4	4
CHM-102 P	Chemistry(Lab)	0	0	2	2	1
MTH-101	Mathematics	3	1	0	4	4
HSS-101	Humanities	3	1	0	4	4
CIV-102	Engineering Drawing	1	0	3	4	4
IT-101	Computer Science	3	0	0	3	3
IT-102 P	Computer Science (Lab)	0	0	2	2	1
WSP-1P	Workshop Practice	1	0	3	4	2
2nd Semester						
PHY-201	Physics-II	3	0	0	3	3
PHY-201 P	Physics-II (Lab)	0	0	2	2	1
CHM-201	Chemistry-II	3	1	0	4	4
CHM-201 P	Chemistry-II (Lab)	0	0	2	2	1
MTH-201	Mathematics-II	3	1	0	4	4
HSS-201	Humanities-II	3	1	0	4	4
MED-201	Machine Drawing	1	0	2	3	3
CSE-201	Programming	3	0	0	3	3
CSE-202 P	Computer Programming (Lab)	0	0	2	2	1
CIV-201	Engineering Mechanics	3	1	0	4	4
WSP-II P	Workshop Practice	1	0	3	4	2
3rd Semester						
ELE-301	Basic Electrical Engineering	2	1		3	3
ELE-301P	Basic Electrical Engineering LAB	-	-	2		1
ECE-301	Network Analysis and Synthesis	3	1	0	4	4
ECE-302	Electronics-I	2	1		3	3
ECE-302P	Electronics-I LAB	-	-	2		1

PHY-303	Electro Magnetic Fields & Waves	2	1	0	3	3
MET-302	Electrical Engineering Materials	2	1	0	3	3
MTH-305	Mathematics-III	2	1	0	3	3
MECH-ELE	Engineering Thermodynamics	3	1	0	4	4
ELE-301	Principles of Electrical Engineering (For ECE Department)	3	1		4	4
ELE-301P	Principles of Electrical Engineering LAB(For ECE Department)			2		1
ELE-302	Electrical Engineering Technology (For Civil Engineering Department)	2	1		3	3
ELE-302P	Electrical Engineering Technology LAB (For Civil Engineering Department)			2		1
ELE-303	Electrical Engineering Technology (For Chemical Engineering Department)	2	1		3	3
ELE-303P	Electrical Engineering Technology LAB (For Chemical Engineering Department)			2		1
ELE-304	Electrical Engineering Technology (For Metallurgical Engg. Department)	2	1		3	3
ELE-304P	Electrical Engineering Technology LAB(For Metallurgical Engg. Department)			2		1
ELE-305	Basic Electrical Engineering (For Computer Sciences and Engineering)	2	1		3	3
ELE-305P	Basic Electrical Engineering LAB (For Computer Sciences and Engg.)			2		1
ELE-306	Circuit Analysis (For Information Technology)	2	1		3	3
ELE-306P	Circuit Analysis LAB (For Information Technology)			2		1
4 th Semester						
ELE-401	Electric Machines-I	3	1	0	4	4
ELE-401P	Electric Machines-I Lab	0	0	2	-	1
ELE-402	Control Systems-I	3	1	0	4	4
ELE-403	Electrical Measurements and Measuring Instruments	3	1	0	4	4
ELE-403P	Electrical Measurements and Measuring Instruments Lab	0	0	2	-	1

ECE-402	Electronics – II	3	1	0	4	4
ECE-402P	Electronics – II Lab.	0	0	2	-	1
CIV-401	Hydraulics and Hydraulic Machines	2	1	0	3	3
MTH-402	Mathematics-IV	2	1	0	3	3
ELE-405	Electrical Machines (For ECE Department)	2	1		3	3
ELE-406	Electrical Engineering Technology (For Electrical Engineering Department)	2	1		3	3
ELE-406P	Electrical Engineering Technology Lab. (For Electrical Engineering Department)	0	0	2		1
ELE-407	Control Systems (For ECE Department)	2	1		3	3
ELE-407P	Control Systems Lab. (For ECE Department)	0	0	2		1
ELE-408	Control Systems (For Information Technology)	2	1		3	3
ELE-408	Control Systems (For CSE)	2	1		3	3
5 th Semester						
ELE-501	Power Systems – I	2	1	0	3	3
ELE-501P	Power Systems - I Lab.	0	0	2	-	1
ELE-502	Electric Machines-II	3	1	0	4	4
ELE-502P	Electric Machines-II Lab.	0	0	2	-	1
ELE-503	Control System-II	2	1	0	3	3
ELE-503P	Control System & VI Lab.	0	0	2	-	1
ELE-504P	Computer Aided Simulation of Electrical Systems	0	0	3	-	2
ECE-508	Communication Systems	2	1	0	3	3
ECE-509	Digital Electronics & Logic Design	2	1	0	3	3
ECE-509P	Digital Electronics & Logic Design Lab.	0	0	2	-	1
MTH-503	Mathematics-V	2	1	0	3	3
6 th Semester						
ELE-601	Power Systems-II	3	1	0	4	4
ELE-601P	Power Systems-II LAB	0	0	2	-	1
ELE-602	Power Electronics	3	1	0	4	4
ELE-602P	Power Electronics LAB	0	0	2	-	1
ELE-603	Electric Machines Design	3	1	0	4	4
ELE-604	Tour & Training	0	0	0	2	2
ELE-605	Digital Signal Processing	3	1	0	4	4
ELE-606	Microprocessors	3	1	0	4	4
ELE-606P	Microprocessors LAB	0	0	2	-	1

ELE-607	Power Electronics (For ECE Department)	2	1		3	3
ELE-607P	Power Electronics Lab. (For ECE Department)	0	0	2		1
7 th Semester						
ELE-701	Power System Protection	2	1		3	3
ELE-701 P	Power System Protection LAB.			2		1
ELE-702	Advanced Power Electronics	3	1	0	4	4
ELE-703	Power Systems-III	3	1	0	4	4
ECE-708	Electronic Measurements & Instrumentation	2	1		3	3
ECE-708P	Electronic Measurements & Instrumentation LAB			2		1
ELE-704	Power Station Practice	2	1	0	3	3
ELE-1-14	Elective	2	1	0	3	3
ELE-706P	Project Preliminary Work/ Seminar	0	0	3		3
ELE-705	Electrical Power Systems (For ECE Department)	2	1		3	3
ELE-705P	Electrical Power Systems Lab. (For ECE Department)	0	0	2		1
8 th Semester						
HSS-701	General Management & Economics	2	1	0	4	03
ELE-1-14 / MTH-705	Elective-I	2	1	0	3	03
ELE-803	High Voltage Engineering	2	1	0	3	03
ELE-803P	High Voltage Engineering Lab.	0	0	2	0	01
ELE-802	Project	0	0	18	12	12
ELE-1-14	Elective-II	2	1	0	3	03
Total		207				

Department Elective Subset for 7th & 8th Semesters (Electrical)

BATCH 2015 ONWARDS

Electives –I, II, III (3 credits each)

1. Distribution System Automation	ELE-1/E
2. Industrial Process Instrumentation & Telemetry	ELE-2/E
3. Selected Topics in Advanced Control	ELE-3/E
4. Mechatronics	ELE-4/E
5. Advanced Power Systems Control	ELE-5/E
6. Power Systems Transients	ELE-6/E
7. System Planning & Load Forecasting	ELE-7/E
8. EHV AC & DC Transmission	ELE-8/E
9. Maintenance & Design of Electrical Sub Stations	ELE-9/E
10. Power System Reliability	ELE-10/E
11. Utilization & Traction	ELE-11/E
12. Microcontroller & their Applications + LAB	ELE-12/E
13. Electric Drives + LAB	ELE-13/E
14. Renewable Sources of Electrical Energy	ELE-14/E
15. Optimization Techniques	MTH-705

2.1.3 State the components of the curriculum and their relevance to the POs and the PEOs (05)

Programme curriculum grouping based on different components

Course Component	Curriculum Content (% of Total Number of Credits of the Programme)	Total Number of Contact Hours	Total Number of Credits	POs	PEOs
Mathematics	8.212%	17	17	PO1,PO2, PO3,PO4, PO5,	PEO1, PEO2, PEO3
Sciences	8.695%	22	18	PO1,PO2, PO3,PO4, PO5,PO6	PEO2, PEO3
Computing	3.86%	10	8	PO1,PO2, PO3,PO4	PEO1, PEO2, PEO3
Humanities	5.31%	11	11	PO6,PO7, PO8,PO9, PO10,PO11, PO12	PEO4
Professional Core	47.82%	114	99	PO1, PO2, PO3, PO4, PO5,PO12	PEO1, PEO2, PEO3
Engineering Science	11.59%	24	24	PO1,PO2, PO3,PO4, PO5,PO6	PEO1, PEO2, PEO3
Institute Electives	1.93%	8	4	PO1, PO3	PEO3
Projects/Training/Seminar	8.212%	15	17	PO1,PO2, PO3,PO4, PO5,PO6, PO10	PEO1, PEO3
Department Electives	4.347%	9	9	PO1,PO2, PO4,PO5, PO6,PO7, PO12	PEO1, PEO2

2.1.4. State the process used to identify the extent of compliance of the curriculum for attaining the Program Outcome (POs) and Program Specific Outcomes (PSOs) (10):

The Department of Electrical Engineering has formed the Departmental Committee for guiding academic activities. The committee headed by Head of the Department consists of senior faculty members, industrial persons, alumni, and current students.

Board curriculum, the concept of outcome-based education, programme outcomes (PO's), course delivery, evaluation process, mapping etc. for achieving excellence in the teaching-learning process has been elaborately discussed. This process has helped us to compliance the board curriculum for attaining the programme outcomes.

Accordingly, feedback, views, expectations were collected from various stakeholders. The process of establishing POs involve a brainstorming session firstly in the department meetings of the faculty based on feedbacks sought from the various stakeholders' thorough interactions/ questionnaire/interviews/meetings.

The department arrives at specific conclusions after a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis based on these interactions and considerations of requirements for developing an ideal student. The program outcomes thus evolved, are put forth in the departmental meeting which reviews the PO's.

2.1.4.1 Process used to identify the extent of compliance of curriculum for attaining the PO's and PSO's

- Identify Course Outcomes for each subject
- Map each Course Outcome with POs and PSOs
- Based on All CO-POs/PSOs mapping, map subject with POs and PSOs
- Categorize entire Curriculum into Mathematics & Sciences, Computing, Humanities and Social Sciences, Professional Core, Engineering Science, Institute Electives, Projects/Training/Seminar, Department Electives
- Map each category with POs and PSO

PROGRAM OUTCOMES

Enlisting the Program Outcomes (PO's) of the Department

PO1: Engineering Knowledge

Apply the knowledge of governing sciences, mathematics and engineering principles for the solution of Electrical Engineering problems.

PO2: Problem Analysis

Identify, analyze and solve problems related to Electrical Engineering systems.

PO3: Design/Development of solutions

Design an electrical process to meet the desired needs within the constraints of economics, safety, and sustainability.

PO4: Conduct investigations of Complex Problems

Ability to think independently and creatively to formulate innovative solutions to Electrical Engineering problems.

PO5: Modern tool usage

Employ learning and skills of modern tools to analyze and design advanced Electrical Engineering processes.

PO6: The Engineer and Society

Apply knowledge necessary to assess the impact of engineering solutions in global, environmental, safety and societal context.

PO7: Environment and Sustainability

Competence and creativity to use engineering principles to address energy and environmental challenges.

PO8: Ethics and Professionalism

Upholding ethical values in undertaking professional responsibilities to achieve the desired goals.

PO9: Teamwork and Leadership

Capacity to work proficiently as a team in all-inclusiveness, and to accept the position of responsibility, accountability, and leadership, with a tolerance for ambiguity.

PO10: Communication Skills

Articulate and interpretable communication abilities, both oral and written, to deliver and express solutions, strategies, instructions, and opinions.

PO11: Project Management and Finance

Employ proper managerial and financial skills to the field of Electrical engineering.

PO12: Life Long Learning

Embody an urge to pursue life-long learning, which advances the understanding of Electrical Engineering and allied areas and keep pace with the contemporary technology.

PROGRAM SPECIFIC OUTCOMES

PSO	Statement
PSO1	<i>Students shall be competent, creative and imaginative Electrical Engineers employable in fields of design, research, manufacturing, safety, quality, Technical Services.</i>
PSO2	<i>Students shall be able to progress through an advanced degree, certificate programs or participate in continuing education in Electrical Engineering, business, and other professionally related fields.</i>
PSO3	<i>Students should take lead in innovation and entrepreneurship activities with high professional standards and moral ethics and prove themselves beneficial to society at large</i>

Course Outcomes (COs)

COs are statements of what a student should be able to demonstrate upon the completion of a course. They are assessable and measurable knowledge, skill, abilities or attitudes that students attain by the end of the course.

Enlisting the Course Outcomes:

Course Code Course Name	Course Outcomes
ELE-301 Basic Electrical Engineering	CO1: To analyze and evaluate the electrical circuits, apply basic laws in circuit theory and to determine electric circuit parameters.
	CO2: To identify and analyze various energy sources and their transformation.
	CO3: Power and energy relations, analysis of series-parallel D.C. Circuits and network theorem along with applications.
	CO4: Analysis of A.C circuits, network theorems in A.C circuits and understanding the concept of active and reactive power.
	CO5: To study the characteristics of 3 phase systems, Current and voltage relations in star/delta configuration's, Balanced/unbalanced systems.

<p style="text-align: center;">ECE-301 Network Analysis and Synthesis</p>	<p>CO1: Development of the circuit Concept and Conventions for describing networks.</p>
	<p>CO2: Apply first order differential equations in analyzing the networks.</p>
	<p>CO3: Applications of Laplace transform to evaluate the solution of networks.</p>
	<p>CO4: Waveform analysis and synthesis of unit, ramp, parabolic and impulse functions.</p>
	<p>CO5: Study of Two port theory, analyzing the relationship of two port parameters and their applications and fundamentals of filters, Classification and design.</p>
<p style="text-align: center;">ELE-401 Electric Machines-I</p>	<p>CO1: Detailed study of Transformer construction, operation, phasor analysis, developing equivalent circuit models, various transformer tests and finding the efficiency of operation.</p>
	<p>CO2: Study the principles of electromechanical energy conversions.</p>
	<p>CO3: Study the construction and principle of operation of DC machines, formulating emf and torque equations.</p>
	<p>CO4: To compare the characteristics of various types of DC generators and motors, discuss starting and braking of DC motors.</p>
	<p>CO5: Compare and contrast various types of DC motors for various domestic and commercial applications.</p>
<p style="text-align: center;">ELE-402 Control System-I</p>	<p>CO1: Introduction to control systems, compare and contrast open and closed loop, automatic and manual systems and their applications.</p>
	<p>CO2: Introduction to transfer functions, developing and analyzing block diagrams, evaluating signal flow graphs.</p>
	<p>CO3: To determine and analyze the time response of first and second order systems to various standard test inputs.</p>
	<p>CO4: Investigate, evaluate and analyze the stability of control systems, compare and contrast absolute and relative stability.</p>
	<p>CO5: Study and design of PID controllers, lead-lag Compensators and modeling of dynamic systems in state space.</p>
<p style="text-align: center;">ELE-403 Electrical Measurements and Measuring Instruments</p>	<p>CO1: To study the construction and principle of operation of various electromechanical indicating instruments and their mathematical analysis.</p>
	<p>CO2: Evaluation of power, energy, and power factor of single and three phase circuits.</p>

	CO3: Determination of small, medium and large resistances using different methods.
	CO4: Evaluation of Inductance, Capacitance, and Frequency using A.C bridges.

ELE-501 Power System-I	CO1: Understanding the basics of power system generation, transmission & distribution
	CO2: Classification of overhead line insulators and evaluation of string efficiency.
	CO3: Modeling, design, and evaluation of various parameters of transmission lines.
	CO4: Acquire knowledge of underground cables, its construction, methods of laying, and its grading, determination of fault location.
	CO5: Investigate the concept of corona and its effect online design.
ELE-502 Electric Machines-II	CO1: Explain and analyze the concepts of A.C. rotating electrical machines.
	CO2: Explain the concepts of Induction machines, their types, construction, characteristics, developing equivalent circuits, investigating various methods of starting, speed control and studying its applications.
	CO3: Explain the concepts of Synchronous machines, their types, construction, working principle, characteristic and developing equivalent circuits.
ELE-503 Control system-II	CO1: Investigation of state variable modelling.
	CO2: Analysis and design of state vector equations, determination of controllability and observability.
	CO3: Study and analysis of Digital control system.
	CO4: Study of nonlinear control systems, its linearization, design using linearized models.
	CO5: Investigate advanced control techniques like Fuzzy logic control, Adaptive control, and Neural Network-based control.
ELE-601 Power System-II	CO1: Acquire and apply the knowledge of Per unit representation of Power system.
	CO2: Analysis of balanced faults & unbalanced faults.
	CO3: Investigating the concepts of Insulation co-ordination, over voltage, lightning surges, switching surges, and switching operations.
	CO4: Analysis of interference of power lines with communication circuits.
	CO5: Analysis of Surge Impedance Loading performance of transmission

	lines and the knowledge of HVDC & FACTS Technology.
ELE-602 Power Electronics	CO1: Develop the knowledge of Power Semi-conductor devices.
	CO2: Analysis of driving and control circuits and Power Electronic converters.
	CO3: Analysis and design of DC to DC converters (choppers), D.C to A.C converters(Inverters), A.C Voltage controllers, Cyclo-converters (1-phase & 3-phase).
	CO4: Investigating the Power Quality issues and the present status of Improved Power Quality Converters (IPQCs).
	CO5: Applications of power electronic devices in the real world.
ELE-603 Electric Machine Design	CO1: Investigation and evaluation of principles of electrical machine design and magnetic circuit calculations.
	CO2: Designing of armature winding, D.C machines, single-phase and three-phase transformers.
	CO3: Designing of Induction motors (1-phase & 3-phase) and Synchronous Machines.
ELE-605 Digital Signal Processing	CO1: Compare and contrast various Signals & Systems.
	CO2: Evaluation and analysis of a sampling of continuous time signals.
	CO3: Mathematical analysis of Z-Transform and Fourier transform of Linear time-invariant systems.
	CO4: Study and designing the structure of Discrete-time Systems
	CO5: Mathematical analysis and comparison of Filter Design Techniques.
ELE-606 Microprocessors	CO1: Study the overview of 8085 Microprocessor and its basic terminology.
	CO2: Investigating and understanding of 8085 μ p architecture.
	CO3: Investigation of the Instruction set, analysis, and application of Programming Techniques, Interrupts, Serial I/O and Interfacing.
	CO3: Study the introduction to 8086 μ p.

<p align="center">ELE-604 TOUR & TRAINING</p>	<p>CO1: Practical Knowledge of power system / Industrial equipment's</p> <p>CO2: Knowledge of modern tools & its analysis.</p> <p>CO3: Understanding of various constraints its impact on society.</p>
<p>ELE-701-Power System Protection</p>	<p>CO1: Understand principles, functions and analyze the characteristics of protective relays.</p> <p>CO2: Compare and contrast different types of electromagnetic relays, their operating principles, and characteristics.</p> <p>CO3: Investigation of different types of faults in a generator and its methods of protection and gain knowledge of digital protection, learn about various DSP techniques, numerical algorithms, and simulation of transients</p> <p>CO4: Evaluating and analyzing different protection schemes for the transformer and Understand working, classification and characteristics of fuses.</p> <p>CO5: Investigating various protection schemes for feeders, bus bars, and transmission lines and explain the basic principle of operation of circuit breakers and their types.</p>
<p>ELE-702-Advanced Power Electronics</p>	<p>CO1: Investigating modern self-commutating power semiconductor devices</p> <p>CO2: Analysis of three-phase voltage source and current source inverters and their modulation strategies.</p> <p>CO3: Study and design of switched mode power supplies.</p> <p>CO4: Study of switched mode and isolated DC-DC converter.</p> <p>CO5: Gain knowledge of power line disturbances and various power conditioners.</p>
<p>ELE-703-Power Systems III</p>	<p>CO1: Gain knowledge of load flow techniques, mathematical analysis, and their comparison.</p> <p>CO2: Develop an overview of power system stability phenomenon.</p> <p>CO3: Discuss Automatic Generation Control by developing various models and their control strategies.</p> <p>CO4: Understand and evaluation of generation and absorption of reactive power and study various voltage control methods.</p> <p>CO5: Formulation and analysis of the economic operation of the power system.</p>
<p>ELE-704-Power Station Practice</p>	<p>CO1: Understand the economics of generation and power factor improvement.</p> <p>CO2: Gain knowledge of power tariff and its various types.</p> <p>CO3: Discuss neutral grounding and methods of neutral grounding.</p>

	<p>CO4: Explain different types of power stations and their auxiliaries.</p> <p>CO5: Understand an overview of substation and substation equipment.</p>
<p>ELE-706P Project Preliminary work/seminar</p>	<p>CO1: Knowledge of advanced technique in the electrical field.</p> <p>CO2: Test of communication skill and report writing.</p>
<p>ELE-802 Project</p>	<p>CO1: Identification of real-world problem.</p> <p>CO2: Awareness of design methodologies & its implementation.</p> <p>CO3: Knowledge of advanced techniques.</p> <p>CO4: Technical report writing.</p>
<p>ELE-803-High Voltage Engineering</p>	<p>CO1: Explain conduction and breakdown in gases.</p> <p>CO2: Explain conduction and breakdown in liquid dielectrics.</p> <p>CO3: Explain conduction and breakdown in solid dielectrics and understand various methods of measurement of high voltages and currents.</p> <p>CO4: Study the application of insulating materials in electrical and electronic equipment and understand various methods of nondestructive testing.</p> <p>CO5: Study the phenomenon of generation of high voltages and currents and gain knowledge of testing of electrical apparatus.</p>

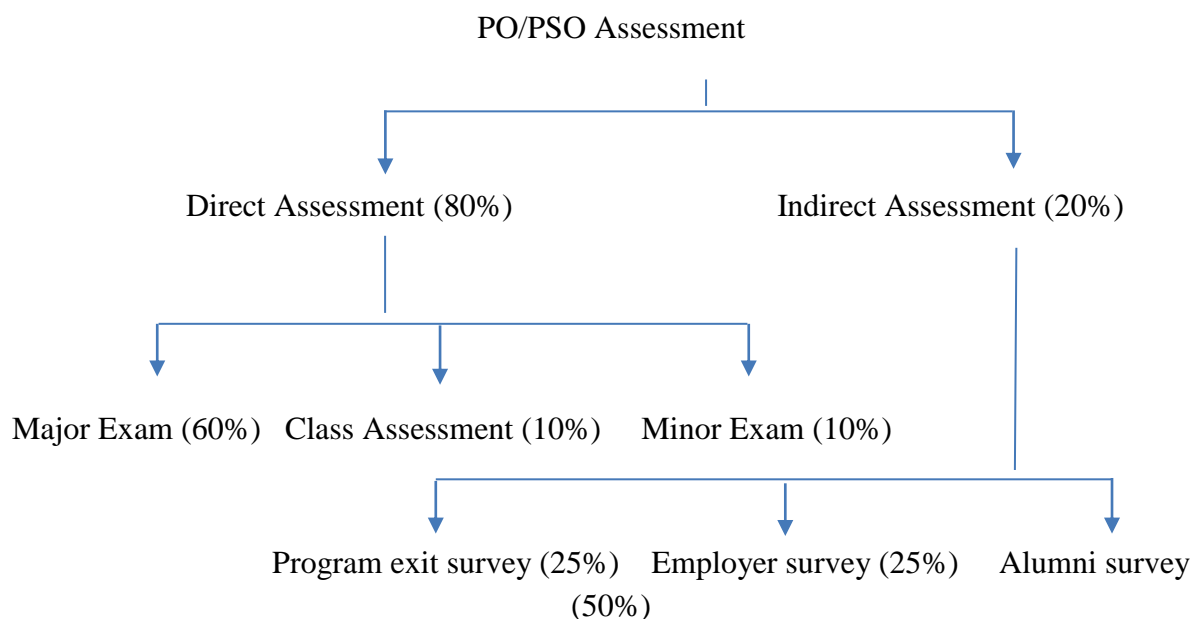
Elective course outcomes

Course	Course Outcomes
ELE-9/E-MAINTENANCE & DESIGN OF ELECTRICAL SUB STATIONS	<p>CO1: Understand general aspects of substation, bus bar arrangements and different substation equipment's.</p> <p>CO2: Gain knowledge of voltage and current transformers, circuit breakers and protective relays.</p> <p>CO3: Understand general earthing of a substation and complete design of earthing grid.</p> <p>CO4: Gain knowledge of auxiliaries: Wiring diagrams and control cable schedule.</p> <p>CO5: Discuss Gas Insulated substation.</p>
ELE-11/E- UTILIZATION AND TRACTION	<p>CO1: Understand electric drives, control devices for industrial motors and applications of electric drives.</p> <p>CO2: Explain electric traction, configuration and performance of electrical vehicles, traction motor characteristics, vehicle performance and energy consumption.</p> <p>CO3: Discuss laws of illumination, street lighting, different types of lamps-incandescent, glare and its remedy.</p> <p>CO4: Gain knowledge of electric heating, electric welding and control devices, and welding equipment.</p>
EEM-110- Power Systems Restructuring and Deregulation	<p>CO1: Understand key issues in electric utility restructuring.</p> <p>CO2: Gain knowledge of deregulated Models, competitive electricity market and different methods of transmission pricing.</p> <p>CO3: Understand congestion management electric energy trading and present scenario of deregulation around the world.</p>

Mapping the course groupings with the PO achievement:

Course Group	Number of Subjects	PO's
Mathematics & Basic Sciences	14	PO1, PO2, PO3, PO4, PO5, PO6,
Engineering Sciences	11	PO1, PO2, PO3, PO4, PO5, PO6
Humanities and Social Sciences	3	PO6, PO7, PO8, PO9, PO10, PO11, PO12
Professional Core	33	PO1, PO2, PO3, PO4, PO5, PO12
Department Electives	3	PO1, PO2, PO4, PO5, PO6, PO7, PO12
Computing	4	PO1, PO2, PO3, PO4
Institute Electives	1	PO1, PO3
Projects/Training/Seminar	4	PO1, PO2, PO3, PO4, PO5, PO6, PO10

Attainment level of CO's



Tabulation of the attainment levels for the three academic years under consideration:

Professional Core Courses	2011-2015 Total students-71			Yearly CO Attainment Level %	2012-2016 Total students-70			Yearly CO Attainment Level %	2013-2017 Total students-69			Yearly CO Attainment Level %
	L1	L2	L3		L1	L2	L3		L1	L2	L3	
Basic Electrical Engineering	8	35	27	73.52	7	29	33	71.42	6	26	31	65.79
Network Analysis and Synthesis	4	21	43	65.63	5	28	37	70.85	6	26	36	70.14
Electric Machines-I	8	39	24	75.49	9	31	30	74.00	4	16	44	62.60
Control Systems-I	35	20	16	85.35	40	25	4	89.14	24	19	10	65.50
Power Systems-I	11	41	18	76.90	4	42	29	78.57	9	29	31	73.62
Electrical Measurements and Measuring Instruments	24	40	8	85.63	12	33	23	74.57	30	33	5	86.08
Control System-II	38	17	15	85.35	51	20	4	99.14	22	34	13	82.60
Electric Machines-II	8	42	20	75.49	3	22	41	64.57	4	31	33	70.43
Power Systems-II	13	38	19	77.18	17	42	9	80.00	9	18	32	61.73
Power Electronics	4	23	40	65.35	2	20	44	63.42	3	30	24	60.00
Digital Signal Processing	4	31	36	70.98	32	23	14	84.00	18	39	14	83.47
Microprocessors	46	21	3	90.98	14	36	21	79.14	24	44	2	87.53

Electric Machines Design	12	38	21	77.46	15	31	23	76.57	5	13	43	59.71
Power System Protection	28	38	7	88.16	22	37	14	85.71	28	31	11	86.08
Advanced Power Electronics	17	40	15	81.69	10	38	25	79.14	32	32	6	88.69
Power Systems-III	3	47	20	74.08	1	17	53	66.28	25	30	13	82.31
Power Station Practice	18	42	12	82.81	21	37	18	87.71	47	19	4	93.62
High Voltage Engineering	21	51	3	89.57	17	40	15	82.85	10	34	25	75.65

The Course Outcome (CO) attainment level is discussed in light of the course topics, question papers, and student results.

There is a more or less uniform distribution of almost all CO's in all course assessments.

The student results, define the index for deciding the CO achievement, as to which bandwidth of grades the majority of the class stands in. The CO attainment levels have been studied for a span of three academic years, viz., 2011-2015, 2012-2016 and 2013-2017 graduate batches.

The mathematical relation that has been used for calculating the attainment level indices, is given as,

$$A.L = \frac{[(\text{Number of students} * L1) + (\text{Number of students} * L2) + (\text{Number of students} * L3)]}{\text{Total class roll}};$$

Where grading levels have been divided into three levels of L1, L2, and L3.

L1: 100% CO attainment: Top absolute grade achievers;

L2: 80% CO attainment: Second absolute grade achievers;

L3: 60% CO attainment: Third absolute grade achievers.

2.1.4.1.PROCESS TO IDENTIFY GAPS IN THE CURRICULUM:

1. Alumni Survey

- Measures the degree to which past students believe they achieved program-level learning outcomes.
- Overall satisfaction with the program.
- Overall satisfaction with the program delivery.
- Information on current professional or academic status. Typically collected every three-four years

2. Industry/Employers Survey

- Provides general information on current industry trends.
- Desirable graduate attributes.

- Overall perceptions of program quality.
- Strengths and expectations of graduates.
- Typically collected every two years

3. In Program Students Survey

- Measures the degree to which current students believe they are achieving
- Program-level learning outcomes.
- Overall satisfaction with the program.
- Overall satisfaction with the program delivery.
- Typically collected every two years

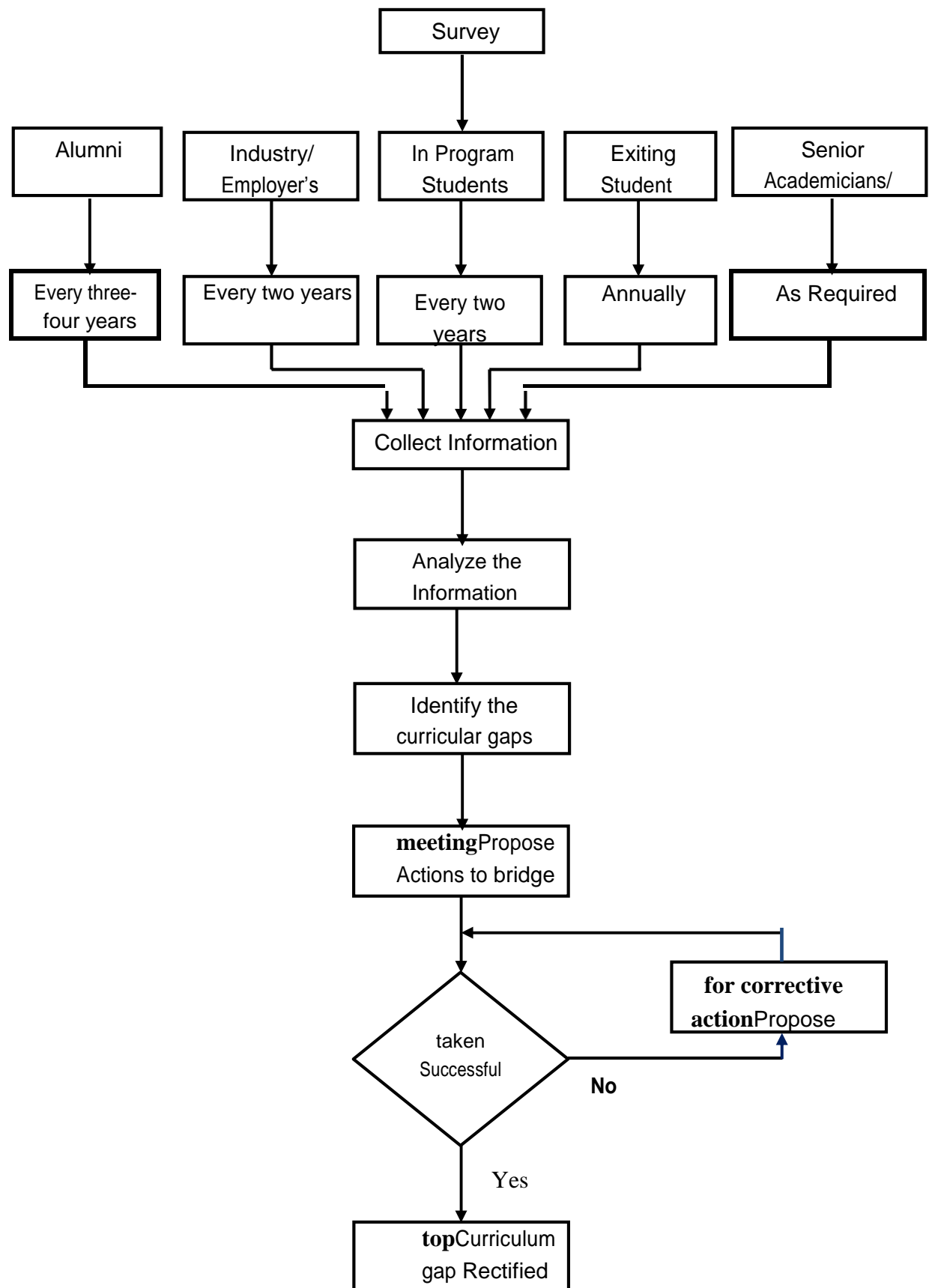
4. Exiting Students Survey

- Measures quality of the program and satisfaction with the curriculum.
- An overall program delivery.
- Collected annually

5. Senior Academicians/Faculty Survey

- Provides general information on the quality of the program.
- Comparison with the syllabi of premier institutes.
- Strategic directions for the program.
- Satisfaction with the curriculum.
- Collected as required

The process to identify curricular gaps through Survey



Measures and processes used to improve curriculum

In view of the gaps identified, BOS meeting was held on 16-07-2012 and the following changes were made to the course curriculum:

1. The Elective IV [Advanced Power Electronics] with LTP 3:1:0:4 taught at an 8th-semester level as an elective course be shifted to 7th-semester level with the same LTP as a core course.
2. The “Electric Drives” along with Lab Course taught at 7th semester as core course with LTP 2:1:2:4 are shifted to 8th-semester level as an elective with same LTP.
3. Moreover, “Virtual Instrumentation Lab” being taught at the 8th semester level with the LTP 0:0:2:1 be clubbed with control system-II Lab. At the 5th semester level. The Lab Course is also renamed as Control System and Instrumentation Lab with LTP 0:0:2:1. This will also help to reduce the number of credits from 26 to 25 at 8th semester, so that uniformly in terms of No. of credits at each semester is maintained i.e 25 credits per semester.
4. The reformulated scheme of courses for the 5th semester, 7th semester and 8th semester for 2010 batch onwards after making correction are appended as Annexure –2.1 along-with List of Electives.

Another meeting of BOS was held on 27-08-2014. It was suggested to modify the present B.Tech curriculum to conform to the present requirements and objectives. It was resolved to make the following changes in the scheme:

1. 3rd semester:

- i) The course “Principles of Electrical Engineering” shall be renamed as “Basic Electrical Engineering”, similarly “Principles of Electrical Engineering”.
- ii) The course “Mechanical Engineering” taught by Electrical Engineering Department of the Institute was suggested to be renamed as Engineering Thermodynamics.

2. 4th semester:

The course No. ELE 404 i.e. Non-Conventional Energy Sources was decided to be dropped and introduce it as an elective at higher semester level with the modified syllabus. According to the revised credit structure of following courses was revised as follows:

- Control system-I 3 1 0 4
- Electric measurements and measuring Instruments 3 1 0 4
- Electronics-II 3 1 0 4

3. 5th semester:

Power System Lab-I which was earlier dropped from 5th semester was reintroduced. Accordingly, the revised credit structure of Power System-I is 2 1 0 (3 credits) and for Power, System Lab will be 0 0 2(1 credit)

4. 6th semester:

The course No. ELE-603 was decided to be renamed as Electric Machine Design instead of Computer-Aided Design of Electric Machines and course no. ELE-603P (Computer Aided Design Lab) was dropped. Furthermore the syllabus of course no. ELE-602 i.e. Power Electronics was modified as proposed by the concerned course in charge and DMC (Departmental Monitoring Committee). Also the credit structure, of course, ELE-606 i.e. Microprocessor was revised to 3 1 0 4.

5. 7th semester:

The courses: General Management and Economics (HSS-701) and one of the electives were shifted to 8th semester and instead Power system-III and Power Station Practice was included in 7th semester. The syllabus of Advanced Power Electronics was revised as proposed by course in charge and DMC.

6. 8th semester:

Due to the decision at 5, the courses Power system-III and Power Station Practice were shifted to 7th semester and accordingly courses “General Management & Economics” and one elective is shifted to 8th semester. Furthermore the course Non-Conventional Energy Sources dropped at 4th-semester level was included in 8th-semester level as an elective with modification of syllabus with the new title “Renewable Sources of Electrical Energy”.

It was further decided that Elective-IV i.e High Voltage Engineering be treated as core course instead of electives.

7. Electives:

It was decided to have a common list of electives to be floated at a 7th and 8th-semester level to have more flexibility. Further, the electives i) Restructuring of Power System ii) Power System Optimization iii) FACTS iv) Fuzzy Logic and Neural Network (renamed as Soft Computing) and v) Stand Alone Power System will be dropped from the list as these were introduced at M.tech level.

The BOS records have been attached in Annexure 2.1

Survey Form Templates

1. Alumni Survey Template Form

<u>Alumni Survey Form</u>		
<i>Thank you for taking the time to fill out this questionnaire. All the information will be kept confidential and will be used only for statistical purposes. As an alumnus, your opinions are valued and are utilized to help us make periodic changes and updates for Continuous improvement of our undergraduate program.</i>		
Name of person completing the form		
Branch		
Year of Graduation		
Mailing address		
Placement	Before/after graduation	Core/Software
Name of the Company		
<i>Please rate each of the following skills, abilities or attributes in terms of their importance to state how well your education at National Institute of Technology, Srinagar prepared you for these.</i>		

<i>Skills, abilities, and attributes</i>	<i>Level of Preparation</i>				
	<i>Extremely Important</i>	<i>Very Important</i>	<i>Important</i>	<i>Important</i>	<i>Important</i>
Apply Knowledge of mathematics, Basic Sciences and Engineering.					
Problem Identification and Analysis					
Design a system and develop solution to the problem					
Investigate and Handle complex problems					
Ability to use techniques and tools in engineering practice					
Understand and appreciate the impact of engineering in the societal and global contexts					
Be aware of existing issues (e.g. Economics of engineering, Environmental issues)					
Understand professional and ethical responsibilities as an engineer (e.g., safety, professional ethics, code of conduct)					
Function effectively in teams					
Proficient in the English language in both communicative and technical forms					
Be aware of the need for life-long learning (Seeking further education, self-learning, Membership in professional societies)					
Project Management and Finance					
Suggestions if any:					
Date:	Signature:				

2. Employer Survey Template Form:

Employer Survey Form

The purpose of this survey is to obtain Employer's input on the quality of education of undergraduate programs in National Institute of Technology, Srinagar.

Your sincere cooperation would enable us to improve the quality of our graduates as per your requirement.

1. Name of Company/Organization:
2. MailingAddress :
3. Sector : Private Public Academia

What are the pertinent employability skills to stay updated in current industry trends and thereby improving the quality of the undergraduate program?

Logical Thinking, Good Aptitude, Excellent Communication.

Rate the NIT Srinagar Graduates working in your organization using the following criterion.

S. No.	Overall, are you satisfied with:	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Somewhat Satisfied</i>
1.	Capacity for development and analysis of engineering problems and formulation of appropriate solutions, retaining Professional and ethical responsibilities.			
2.	Aptitude for self-education, ability to learn new skills and a clear appreciation for the value of lifelong learning to update professional knowledge.			
3.	Understanding professional engineering solutions for sustainable development and their application in global, national and Societal contexts.			
4.	Dexterity in the differentiation of management techniques and possession of leadership skills that enable the successful function of multi-disciplinary teams.			

Signature: Name and Designation

3. In Program Students Survey

In-Program Student Survey Form

National Institute of Technology, Srinagar Electrical Engineering Department In -Program Student Survey Form		
Name:		Year:
Email:		Phone
Assessment of Knowledge, Skills, Abilities, and Attributes presently acquired at NIT Srinagar		
<i>Please rate each of the following Knowledge, Skills, Abilities, Attitudes or Attribute in terms how well NIT Srinagar inculcated them in your education so far. (tick mark your choice)</i>		
1	Ability to acquire and apply knowledge of basic mathematics, science, and engineering fundamentals. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
2	Ability to apply analytical skills to engineering problems. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
3	Ability to conduct experiments, analyze data, and present results. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
4	Ability to conduct independent research for information required in engineering problem Solving. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
5	Ability to use modern technologies and tools necessary for practice. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
6	Ability to understand global issues related to engineering. <i>If not satisfied give your suggestions to improve.</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
7	Understand the importance of ethical and professional responsibility. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
8	An ability to function on multi-disciplinary teams. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
9	An ability to communicate effectively. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>
10	A recognition of the need for, and an ability to engage in life-long learning. <i>If not satisfied give your suggestions to improve</i>	
	<i>Extremely Satisfied</i>	<i>Satisfied</i>

4. Exiting Students Survey

Exit Survey Form

* Required details

Electrical Engineering Department National Institute of Technology, Srinagar Exiting Students Survey			
Name*:		Enrolment No*:	
Phone No*:		Email:	
Assessment of Abilities, Skills, and Attributes acquired at NIT Srinagar			
<i>Please rate each of the following items in terms of how well your education at NIT Srinagar prepared you for them.</i>			
1	Basic knowledge in mathematics, science, engineering, and humanities.		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
2	Ability to identify, design, analyze and solve electrical engineering problems		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
3	Ability to identify, design, analyze and solve electrical engineering problems		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
4	Design/ development of complex engineering problems and their solutions		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
5	Use of research-based knowledge and research methods		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
6	Demonstrate the ability to apply advanced technologies to solve contemporary and new problems		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
7	Awareness to apply engineering solutions in global, national and societal contexts		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
8	Understanding professional engineering solutions in societal and environmental contexts		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
9	Understanding professional engineering solutions in societal and environmental contexts		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
10	Understanding of professional and ethical responsibility		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
11	Ability to function as an effective member in multi-disciplinary teams		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
12	Proficient in the English language in both communicative and technical forms		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
13	Demonstrate the ability to choose and apply appropriate resource management techniques		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>

14	Capable of self-education and clearly understand the value of updating their professional knowledge to engage in life-long learning		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
15	Ability to integrate theory and practice to construct systems of varying complexity		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
16	Ability to apply electrical engineering skills, tools and mathematical techniques to analyze, design and model complex systems		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>
17	Ability to design and manage small-scale projects to develop a career in electrical engineering		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not Satisfied</i>

1. Please list some very important skills that you think you had learned in the engineering program.

2. Please write down any comments or suggestions that you think will improve the engineering programs at NIT Srinagar.

3. Please comment about the department Vision and Mission:

Signature:

5. Senior Academicians SurveyForm

Senior Academicians SurveyForm

Thank you for taking the time to fill out this questionnaire. All the information will be kept confidential and will be used only for statistical purposes. The survey is intended to identify the curricular gaps and propose actions to bridge the gap.

Name: Date:

Designation:

Email:

Organization/Institute:

1.	Assessment of the quality of the curriculum of B.Tech in Electrical Engineering	Extremely Satisfied	Satisfied	Somewhat Satisfied
2.	Please specify the content that can be imparted beyond syllabus for the achievement of the following Program Outcomes (if any)			
	1. Engineering knowledge: (Ability to apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to solve complex engineering problems)			
	2. Problem analysis: (Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions)			
	3. Design/development of solutions: (Design solutions for complex engineering problems with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations)			

	<p>4. Conduct investigations of complex problems:</p> <p>(Use research-based knowledge and research methods including design of experiments, analysis, and interpretation of data, and synthesis of the information to provide valid conclusions)</p>	
	<p>5. Modern tool usage:</p> <p>(Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations)</p>	
	<p>6. The engineer and society:</p> <p>(Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice)</p>	
	<p>7. Environment and sustainability:</p> <p>(Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development)</p>	
	<p>8. Ethics:</p> <p>(Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice)</p>	

	<p>9. Individual and teamwork:</p> <p>(Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings)</p>	
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	<p>10. Communication:</p> <p>(Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions)</p>	
	<p>11. Project management and finance:</p> <p>(Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments)</p>	
	<p>12. Life-long learning:</p> <p>(Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change)</p>	

	Have you identified any gaps in the syllabus?	Yes	No	Can't Say
3.	Taxonomy of gap			
	Topic Gap	A topic which is determined to be necessary but does not exist in the current syllabus of a particular subject is identified as a topic gap		

	Depth Gap	Depth gap exists due to lack of modernization of Course content or in-depth coverage of important topics.		
	Knowledge Gap	Knowledge in an area which is found to be essential to stay updated with the technological changes		
4.	Specify the type of gap observed	Topic Gap	Depth Gap	Knowledge Gap
5.	Enumerate the identified Gaps			

	Topic gaps	
	Depth gaps	
	Knowledge Gaps	

6.	<p>Any other suggestions on content to be imparted beyond the syllabus to equip students for the professional world?</p> <p>Any other recommendations to improve the quality of our graduates?</p> <p>Any strategic directions for the improvement of the curriculum of the Batch program in Electrical Engineering.</p>
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2.2. Teaching-Learning Processes (70)

2.2.1. Describe the process followed to improve the quality of Teaching-Learning (15)

Our concern here is specifically with teaching, as opposed to academic or research program structure and administration. The prime focus is given as to how an instructor can improve the quality of instruction in an individual course, and then the more difficult question of how an academic organization (which in our case is our academic department) can improve the quality of its instructional program.

A. Adherence to the Academic Calendar (2):

The Academic Calendar serves as an information source and planning document for students, faculty, staff, and departments, as well as outside organizations. The calendar includes registration dates, class start dates, add/drop deadlines, exam dates and more.

Department calendar of events is prepared well in advance before the commencement of the semester based on the college calendar of events. It consists of the activities planned for the semester which includes internal test dates, display of internal marks, conduction of events like organizing guest lectures, conferences etc. The subject allotment is done well in advance for the staff to prepare lesson plans, course plan, soft and hard copies of the lecture notes. The Academic Calendar for the 2018 working session has been shown in Annexure 2.2.

B. Pedagogical Initiatives(2):

We may define good teaching as instruction that leads to effective learning, which in turn means the thorough and lasting acquisition of the knowledge, skills, and values the instructor or the institution has set out to impart. In the sections that follow, we describe several strategies, known to be particularly effective and as implemented in the departmental teaching methodologies.

1. Instructional objectives are met

Instructional objectives are statements of specific observable actions that students should be able to perform if they have mastered the content and skills, the instructor has attempted to teach. An instructional objective has one of the following stems:

- *At the end of this [course, chapter, week, lecture], the student should be able to ****
- *To do well on the next exam, the student should be able to ****

Where *** is a phrase that begins with an action verb (e.g., *list, calculate, solve, estimate, describe, explain, paraphrase, interpret, predict, model, design, optimize*). The outcome of the specified action must be directly observable by the instructor: words like "learn," "know," "understand," and "appreciate," while important, do not qualify.

Following are illustrative phrases that are attached to the stem of an instructional objective, grouped into six categories according to the levels of thinking they require.

- a) **Knowledge** (*repeating verbatim*)
- b) **Comprehension** (*demonstrating an understanding of terms and concepts*)
- c) **Application** (*solving problems*)
- d) **Analysis** (*breaking things down into their elements, formulating theoretical explanations or mathematical or logical models for observed phenomena*)
- e) **Synthesis** (*creating something, combining elements in novel ways*)
- f) **Evaluation** (*choosing from among alternatives*)

Well-formulated instructional objectives help the teachers prepare lecture and assignment schedules and facilitate construction of in-class activities, out-of-class assignments, and tests. The greatest benefit comes when the objectives cover all of the content and skills the teacher wishes to teach and they are handed out as study guides prior to examinations. The more explicitly students know what is expected of them, the more likely are to meet the expectations.

2. Active learning is promoted in class

Most students cannot stay focused throughout a lecture. After about 10 minutes their attention begins to drift, first for brief moments and then for longer intervals, and by the end of the lecture they are taking in very little and retaining less. A classroom research study showed that immediately after a lecture, students recalled 70% of the information presented in the first ten minutes and only 20% of that from the last ten minutes.

Therefore, students' attention is maintained throughout a class session by periodically giving them something to do. Many different activities serve this purpose, of which the most common is the quick question exercise.

Active learning exercises address a variety of objectives. Some examples follow.

- *Recalling prior material.* The students may be given one minute to list as many points as they can recall about the previous lecture or about a specific topic covered in an assigned reading.
- *Responding to questions.* Any questions a teacher normally asks in class is directed to groups. In most classes—especially large ones—very few students are willing to volunteer answers to questions, even if they know the answers. When the questions are directed to small groups, most students attempt to come up with answers and the teacher thus gets as many responses as he or she wants.
- *Problem-solving.* A large problem can always be broken into a series of steps, such as paraphrasing the problem statement, sketching a schematic or flow chart, predicting a solution, writing the relevant equations, solving them or outlining a solution procedure, and checking and/or interpreting the solution. When working through a problem in class, the

instructor usually completes some basic pre-requisite steps and then asks the student groups to attempt others. It should be ensured and is generally followed, that the groups should generally be given enough time to think about what they have been asked to do and begin formulating a response but not necessarily enough to reach closure.

- *Explaining written material.* TAPPS (Thinking-Aloud Pair Problem Solving) is a powerful activity for helping students understand a body of material. The students are put in pairs and given a worked-out derivation or problem solution. An arbitrarily designated member of each pair explains each statement or calculation, and the explainer's partner asks for clarification if anything is unclear, giving hints if necessary. After about five minutes, the teacher calls on one or two pairs to summarize their explanations up to a point in the text, and the students reverse roles within their pairs and continue from that point.
- *Analytical, critical, and creative thinking.* The students are asked to list assumptions, problems, and errors; predict the outcome of an experiment or explain an observed outcome in terms of course concepts; or choose from among alternative answers or designs or models or strategies and justify the choice made. The more practice and feedback the students get in the types of thinking the teacher wants them to master, the more likely they are to develop the requisite skills.
- *Generating questions and summarizing.* The students are given a minute to come up with two good questions about the preceding lecture segment or to summarize the major points in the lecture just concluded.

3. Cooperative learning is also encouraged to generate group spirit

Cooperative learning (CL) is an instruction that involves students working in teams to accomplish an assigned task and produce a final product (e.g., a problem solution, critical analysis, laboratory report, or process or product design), under conditions that include the following elements:

An extensive body of research confirms the effectiveness of cooperative learning in higher education. Relative to students taught conventionally, cooperatively-taught students tend to exhibit better grades on common tests, greater persistence through graduation, better analytical, creative, and critical thinking skills, deeper understanding of learned material, greater intrinsic motivation to learn and achieve, better relationships with peers, more positive attitudes toward subject areas, lower levels of anxiety and stress, and higher self-esteem.

The following guidelines are used to realize the benefits and avoid the pitfalls of cooperative learning:

- **Proceed gradually when using cooperative learning for the first time.** Cooperative learning imposes a learning curve on both students and instructors. Teachers who have never used it might do well to try a single team project or assignment the first time, gradually increasing the amount of group work in subsequent course offerings as they gain experience and confidence.

- **Form teams of 3-4 students for out-of-class assignments.** Teams of two may not generate a sufficient variety of ideas and approaches, teams of five or more are likely to leave at least one student out of the group process.
- **Instructor-formed teams generally work better than self-selected teams.** Classroom research studies show that the most effective groups tend to be heterogeneous in ability and homogeneous in interests, with common blocks of time when they can meet outside of class.
- **Require teams to assess their performance regularly.** At least two or three times during the semester, teams should be asked to respond to questions like “How well are we meeting our goals and expectations?” “What are we doing well?” “What needs improvement?” and “What (if anything) will we do differently next time?”
- **Expected that some students to be initially resistant or hostile to cooperative learning.**

4. Assessment and evaluation of teaching quality

While student opinions are important and should be including in any assessment plan, meaningful evaluation of teaching must rely primarily on an assessment of learning outcomes. Current trends in the assessment include shifting from standardized tests to performance-based assessments, from teaching-based models to learning-based models of student development, and from assessment as an add-on to more naturalistic approaches embedded in actual instructional delivery. Measures that are used to obtain an accurate picture of students’ content knowledge and skills include tests, performance investigations, project reports, and learning logs and journals.

Improving teaching requires identifying problems with existing academic practices and then applying a combination of sound educational and psychological principles to devise a better approach. Such approaches have already been devised.

- a) Faculty members and administrators define the knowledge, skills, and values that the graduates of the program should have.
- b) With the assistance of experts in pedagogy and learning assessment, the faculty defines the instructional methods most likely to lead to the acquisition of the desired attributes, selects the methods needed to assess the effectiveness of the instruction, and estimates the resources needed to implement both the instruction and the assessment.
- c) The administration commits to provide both the necessary resources to initiate and sustain the program and appropriate incentives for faculty members to participate.
- d) The faculty and administration formulate a detailed implementation plan.
- e) The faculty implements the plan.
- f) The faculty and administration assess the results and modify the plan as necessary to move closer to the desired outcomes.

The steps for improving teaching quality finally come down to this. Teachers, intend to improve teaching in a course consult the literature, see which instructional methods have

been shown to work and implement those with which they feel most comfortable. The faculty just doesn't talk about it, they actually do it.

5. Mentoring system to help at individual levels

The functions of the mentors include:

- Monitoring the academic and general progress of the students.
- Advising them on elective course selection.
- Monitoring their attendance.
- Advising them to register for supplementary exams based on their progress and capabilities.
- Counseling the students on general matters, discipline, conduct, and ethical values.

Efficiency/Impact of the Mentoring System

- The mentoring system of the Institute has been proved to be effective considering different parameters.
- Faculty members are also becoming more responsive to the student's needs.

C. Methodologies to support weak students and encourage bright students (2):

The Electrical Engineering Departments has always strived on the culture of encouraging bright students as well as helping weak students by providing the necessary guidance and moral support. The weaker students are monitored constantly vis-a-vis their class performance, attendance, quiz outcomes, and even grades and pointers. They are helped by arranging extra classes and tutorials. Apart from this, critical cases are even addressed by proper counseling and support by the faculty members. At times, the involvement of parents is also called into effect. Individual attention is also provided to motivate certain weaker student sections.

The department has a well-defined process of monitoring, guiding and assisting slow learners (weak students). Care is taken by the faculties in monitoring the performance of slow learners, the student's deviations from studies are observed by the respective section coordinators and corrective measures are suggested.

The impact of this methodology is that very good results in most examinations. Improvement in analytical abilities of students thus improves the professional bent of students and serves as a good check on the adherence to all PO's in the departmental ideology.

D. Quality of classroom teaching (Observation in a Class) (2):

The faculty of department adopts various innovative Teaching and Learning methodologies to create the best learning environment for the student. These methodologies include traditional whiteboard teaching, presentations, NPTEL/video lecturing, collaborative learning methods are used where every concept is explained with real-world illustrations, design and problematic aspects are conveyed by a shortcut method. The faculty are now oriented towards Outcome-based Education (OBE) and are actively utilizing the OBE to cater the learning needs of students by the innovative way. The lecture session duration is 50 minutes. The Laboratory duration is 2-3 hours. Assignments are given to students for their better performance. Invited talks and seminars on the current trends are done regularly by the industry persons. Tutorial/Remedial classes are conducted for the slow learners based on their performance in external exams and after the first internals. Motivating and guiding students for higher studies and university ranks is the ambition. Technical quizzes are also conducted for the students. All the faculties are requested to maintain attendance registers, course files, work diaries. Industrial visits are conducted at least once a year to reduce the gap between industry and institute. Workshops are organized to help the students to understand concepts beyond the curriculum. One-one discussion, interaction between Professors and students has increased confidence levels of the students. To meet the current requirements of the industry, the syllabus is formulated in light of the PO's. Students gain knowledge by attending workshops, industry visits, guest lectures and discussions with technical professionals. For engineering students, Project Work allows them to gain in-depth knowledge as they carry out a literature survey of the concepts and hands-on experience of the tools and hardware. Through the experiences of independent research, students are better prepared in the areas of critical thinking and learning. This encourages the students to pursue graduate studies and research work.

To enlist a few positive outcomes which are observed after adopting the above teaching methods, viz., improved attendance of students for every class, Active participation of students in OBE (Outcome Based Education) activities, New viewpoints, and new project ideas are derived in class, Better bonding between students and faculty, Appreciation from the parents.

6. Modes of delivery of courses:

The following are various content delivery methods used to deliver the courses:

Method1 – Lectures

Method2 – Tutorial Sessions

Method3 – Laboratory Sittings

Method4 – Quiz/Assignment

Method5 – Presentations

Method6 – Research Literature

Method1 – Lectures

Lectures held in classrooms help in transmitting the knowledge. Here, the course coordinator disseminates the information to the students. Each lecture is generally delivered according to the Course Plan which is distributed to the students at the beginning of the course during the start of each semester. Students are encouraged to interact during the lectures. Thus, lectures generally help in the attainment of PO1, PO2, PO8, and PO12.

Method2 – Tutorial Sessions

Students are provided with a set of questions/problems and are made to solve them individually in the class. These are conducted on regular basis as per schedule and cover the specific unit of the course as mentioned in the syllabus/course plan. The tutorials help to motivate the students to closely interact with the course coordinator/teaching assistant and the peer group and help in the attainment of PO2, PO3, and PO4. The tutorial is conducted to give exercises to the students and also to closely monitor their learning ability and achievement. Tutorials have improved interaction of the students with faculty members which in turn has improved their learning outcomes. Further, tutorials have provided an opportunity for the students to improve their problem analysis and solving skills, team collaboration and communication skills.

Method3 – Laboratory Sittings

Courses having associated laboratory in curriculum help the students in formulating the link between the theory and practice and hence acquire skills. Specific tasks are assigned to the students individually or in groups. These tasks help the student(s) to comprehend the behavior of processes. The students also acquire the skills to utilize the equipment, software, and tools. After solving each task, the students are supposed to interpret the outcome and provide valid conclusions/remarks. Hence, these laboratory settings help in the attainment of PO4, PO5, PO8, and PO9.

Method4 – Quiz/Assignment

Generally, 1-2 surprise quizzes are held during each semester for every course. Such quizzes are based on objective questions viz. multiple-choice questions, questions/problems requiring a one-word answer, recalling the important equations/theorems, etc. Surprise quiz and

assignments allocation alert the students to be prepared for each session. These sessions also help in the attainment of the specific POs.

Method5 – Presentations

Some of the courses are delivered to the students through visuals aids which make them understand the content in a meaningful manner. This delivery method helps in attainment of PO1, PO2, PO8, and PO10.

Method6 – Research Literature

In addition to the textbooks/references mentioned for each course, the students are also exposed to the technical research content such as IEEE Xplore, Science Direct subscriptions and basic NPTEL platforms to enhance their knowledge and skills. They encourage the students to develop an attitude to pursue lifelong learning with high ends. This helps in attainment of PO1, PO2, and PO12.

The course delivery methods and linkages to Program Outcomes are provided next:

Delivery Methods	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Method1 – Lectures	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Method2 – Tutorial Sessions		Y	Y	Y	Y	Y	Y					
Method3 – Laboratory Sitings		Y	Y	Y	Y		Y					
Method4 – Quiz/Assignment	Y	Y	Y	Y	Y	Y	Y				Y	
Method5 – Presentations								Y	Y	Y	Y	Y
Method6 – Research Literature	Y					Y	Y					Y

Table 2.1 provides the course and their delivery methods with linkages to POs.

Table 2.2: Course delivery methods and linkage to POs.

Course Group	Courses	Delivery Methods	POs	Justification
Mathematics & Basic Sciences	Mathematics I, II, III, IV, V	Method 1, Method 2, Method 4	PO1, PO2, PO7, PO11	Attainment of Knowledge
	Chemistry I, II	Method 1, Method 2, Method 4	PO1, PO2, PO7, PO11	Attainment of Knowledge

	Chemistry Lab I, II	Method 1, Method 3	PO1, PO2, PO7, PO11	Attainment of Knowledge and skills
	Physics I, II	Method 1, Method 2, Method 4	PO1, PO2, PO7, PO11	Attainment of Knowledge
	Physics Lab I, II	Method 1, Method 3	PO1, PO2, PO7, PO11	Attainment of Knowledge and skills
	Electro Magnetic Fields and Waves(EMFW)	Method 1, Method3	PO1, PO2, PO7, PO11	Attainment of Knowledge and skills
Engineering Sciences	Engineering Drawing	Method1, Method3, Method 7	PO1, PO2, PO7, PO11, PO12	Attainment of Knowledge and skills
	Machine Drawing	Method1, Method3	PO1, PO2, PO7, PO11, PO12	Attainment of Knowledge and skills
	Electronics I, II	Method 1, Method 2, Method 4	PO1, PO2, PO7, PO11, PO12	Attainment of Knowledge
	Electrical Engineering Materials	Method 1, Method 2, Method 4	PO1, PO2, PO7	Attainment of Knowledge
	Hydraulics and Hydraulic Machines	Method 1, Method 2, Method 4	PO1, PO2, PO7	Attainment of Knowledge
	Engineering Thermodynamics	Method 1, Method 2, Method 4	PO1, PO2, PO7	Attainment of Knowledge
	Electronics I, II Lab	Method 1, Method 3	PO1, PO2	Attainment of Knowledge and skills

	Communication Engineering	Method 1, Method 2, Method 4	PO1, PO2, PO11	Attainment of Knowledge
	Engineering Mechanics	Method 1, Method 3	PO1, PO2, PO11	Attainment of Knowledge, skills
Humanities and Social Sciences	Humanities I, II	Method 1, Method 5, Method 7	PO1, PO8, PO9, PO10, PO11	Attainment of Knowledge, skills, and attitudes
	General Management and Economics	Method 1, Method 5, Method 7	PO1, PO8, PO9, PO10, PO11	Attainment of Knowledge, skills, and attitudes
Professional Core	Basic Electrical Engineering	Method 1, Method2, Method 4	PO1, PO2, PO3, PO6, PO7	Attainment of Knowledge
	Basic Electrical Engineering Lab	Method1, Method3	PO1, PO2, PO3, PO6, PO7	Attainment of Knowledge and skills
	Network Analysis	Method 1, Method 2, Method 4	PO1, PO2, PO6, PO7, PO12	Attainment of Knowledge, skills
	Microprocessor Lab	Method 1, Method 3	PO1, PO7	Attainment of Knowledge and skills
	Microprocessor	Method 1, Method2, Method 4	PO1, PO7	Attainment of Knowledge
	Digital Electronics & Logic Design	Method 1, Method2, Method 4	PO1, PO7	Attainment of Knowledge
	Digital Electronics & Logic Design Lab	Method 1, Method3	PO1, PO7	Attainment of Knowledge and skills
	Electric Machines-I, II	Method 1, Method 2,	PO1, PO2,	Attainment of Knowledge,

		Method 4	PO4, PO6, PO7, PO11	skills
	Electric Machines-I, II Lab	Method 1, Method 3	PO1, PO2, PO4, PO6, PO7, PO11	Attainment of Knowledge and skills
	Control Systems-I, II	Method 1, Method 2, Method 4	PO1, PO2, PO5, PO6, PO7, PO11	Attainment of Knowledge
	Electrical Measurements and Measuring Instruments	Method 1, Method 2, Method 4	PO1, PO2, PO3, PO4, PO8, PO11	Attainment of Knowledge
	Electrical Measurements and Measuring Instruments Lab	Method 1, Method 3	PO1, PO2, PO12	Attainment of Knowledge and skills
	Power Systems – I, II, III	Method 1, Method 2, Method 4	PO1, PO2, PO3, PO6, PO12	Attainment of Knowledge
	Power Systems – I, II Lab.	Method 1, Method 3	PO1, PO2, PO3, PO6, PO12	Attainment of Knowledge, skills
	Control System & VI Lab	Method 1, Method 3	PO1, PO2, PO5	Attainment of Knowledge and skills
	Computer Aided Simulation of Electrical Systems	Method 1, Method 2, Method 3, Method 4	PO1, PO2, PO6	Attainment of Knowledge and skills

	Power Electronics	Method 1, Method 3	PO1, PO2, PO6	Attainment of Knowledge and skills
	Power Electronics Lab	Method 1, Method 2, Method 4	PO1, PO7	Attainment of Knowledge
	Electric Machines Design	Method 1, Method 2, Method 4	PO1, PO2, PO4, PO7	Attainment of Knowledge
	Advanced Power Electronics	Method 1, Method 2, Method 4	PO1, PO7	Attainment of Knowledge
	Digital Signal Processing	Method 1, Method 2, Method 4, Method 5	PO1, PO7, PO11	Attainment of Knowledge
	Power System Protection	Method 1, Method 2, Method 4	PO1, PO2, PO3, PO4	Attainment of Knowledge
	Power System Protection LAB.	Method 1, Method 3	PO1, PO7	Attainment of Knowledge and skills
	Electronic Measurements & Instrumentation	Method 1, Method 3	PO1, PO7	Attainment of Knowledge and skills
	Electronic Measurements & Instrumentation LAB	Method 1, Method 2, Method 3, Method 4	PO1, PO7	Attainment of Knowledge
	High Voltage Engineering	Method 1, Method 2, Method 3, Method 4, Method 6	PO1, PO2, PO3, PO4, PO7, PO11, PO12	Attainment of Knowledge
	High Voltage Engineering Lab.	Method1, Method3	PO1, PO2, PO3, PO4, PO7, PO11, PO12	Attainment of Knowledge and skills

Department Electives	Non-Linear Control	Method1, Method4, Method 6	PO1, PO2, PO5, PO6, PO7, PO11, PO12	Attainment of Knowledge
	Power System Maintenance	Method 1, Method 2	PO1, PO2, PO8, PO11	Attainment of Knowledge
	Power System Restructuring and Deregulation	Method 1, Method 4, Method 5, Method 6	PO1, PO2, PO3, PO8, PO12	Attainment of Knowledge
Computing	Computer Science Programming I, II	Method1, Method2, Method4, Method 8	PO1, PO2, PO7, PO12	Attainment of Knowledge
	Programming Lab I, II	Method 1, Method 3	PO1, PO2, PO7, PO12	Attainment of Knowledge and skills
Institute Electives	Workshop Practice	Method 1, Method 3	PO1, PO2, PO7, PO8, PO9, PO10, PO11, PO12	Attainment of Knowledge, skills
Projects/Training/Seminar	Major Project	Method 1, Method 3, Method 5, Method 6, Method 7, Method 8	PO1, PO2, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	Attainment of Knowledge, skills, and attitudes
	Pre-Project/Viva	Method 3,	PO1,	Attainment of

		Method 4, Method 5, Method 6, Method 8	PO2, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12	Knowledge, skills, and attitudes
	Industrial Training	Method 4, Method 5	PO1, PO2, PO7, PO11, PO12	Attainment of Knowledge, skills, and attitudes
	Seminar	Method 4, Method 5	PO2, PO11, PO12	Attainment of Knowledge, skills, and attitudes

E. Conduct of experiments (Observation in Lab) (2):

Faculty members of respective specializations form a group with a team leader to discuss the preparation of the lab manuals, material requirements, conduction of experiments and cycle of experiments before the commencement of each semester. The Electrical Department based Laboratory experiments are conducted in a session of 2-3 hours, wherein each session the faculty explains the hardware-based connection circuits, small circuits/logic, design/algorithm of the experiments.

As a result, quite favorable results are witnessed in laboratory examinations. Improvement in analytical abilities of students thus improves their placement probability. The stimulating environment makes students learn other modeling and experimental abilities, apart from the curriculum.

F. Continuous assessment in the laboratory (3):

The students write the complete experiment concerned in the observation book and then perform/ design/ simulate the said experiments and interpret the results. The executed experiment with outputs, related theory and algorithm or flowchart is documented in the record book by the students later which is evaluated later by the examiner. In each subject, many students are made to work on a number of additional lab experiments for the better understanding of the subject. Viva questions are prepared in advance for all the experiments. The college also organizes intercollegiate contests, symposiums, to encourage students to demonstrate their experimental and modeling skills.

The Laboratories are evaluated by the faculties for 100 marks based on their performance during the semester, attendance, internal test and record submission.

G. Student feedback of teaching-learning process and actions are taken (2):

- Feedback collected for all courses: Yes

- Feedback collection process:

A well-established feedback mechanism is in place and is operating effectively. At the end of each semester exam, feedback forms from the students on each subject taught by faculty are collected.

A copy of the feedback form template used is attached in Annexure 2.3.

- Percentage of students participating: 95-100%

- Feedback analysis process

The feedback collected is analyzed and this analysis indicates the average score for an individual faculty member in a subject. The analysis clearly indicates the parameters/attributes in which a teacher is good or otherwise. Corrective actions are taken accordingly in the department if need be so.

- The basis of reward/corrective measures, if any

Based on the feedback obtained, the faculty member with most positive feedback is rewarded as “Best Teacher” and in case of negative feedback; change of teacher is done as corrective action.

2.2.2 Quality of end semester Question papers, Assignments and Evaluation (15)

2.2.2.1 Process for internal semester question paper setting and evaluation and effective process implementation. (3)

2.2.2.1.1 Exam Schedule

The end-term exam for the 8th semester (2017-18) takes place as follows:

Exams Begin: 28-05-2018

The end-term exam for 2nd, 4th and 6th semesters (2017-18) takes place as follows:

Exams Begin: From 19-06-2018

The exam timetable and other information can be found on the institute website.

2.2.2.1.2 Exam format

The mid-term exam is of 90 minutes duration. The mid-term paper comprises of three questions and all the three questions in the mid-term paper need to be attempted. The maximum marks for this exam are 30.

The end-term exam is of 180 minutes duration. The end-term paper comprises of five questions and out of five questions four need to be attempted. The maximum marks for this exam are 60.

2.2.2.1.3 Guidelines for setting exam paper and evaluation

All instructors are required to construct a valid and fair exam Question paper that measures the achievement of the planned learning outcomes of the course.

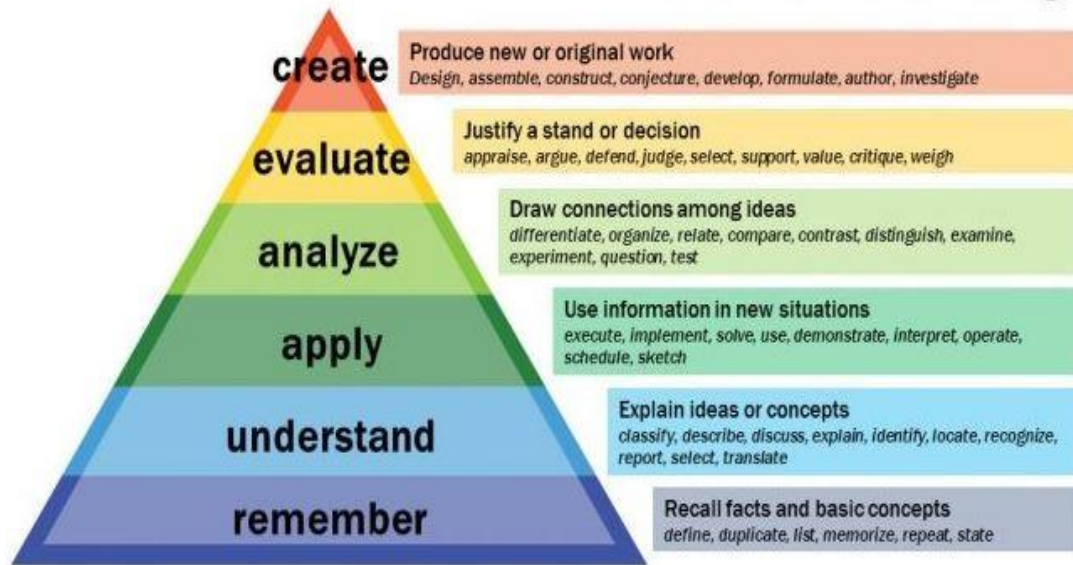
- The final exam Question paper should cover all the materials taught in the semester. (from week 1)
- Critical thinking and application-based questions should be included in major course exams. (All instructors are urged to act as a facilitator to allow for classroom discussion and encourage open thought process enhances critical thinking in students.)
- Questions that were set in the mid-term should not be repeated in the final exam unless very important.
- All the question papers (mid & final) should be submitted to the HOD for review and approval.
- Evaluation of papers should be done in accordance to the submitted marking scheme and answer booklet. (Grading should clearly assess the performance level of students.)

*It is mandatory that all exams (mid & final) should comprise of COs.

2.2.2.2 Process to ensure questions from outcomes/learning level perspective. (2)

- For each subject, question bank is prepared.
- While setting the question paper all previous university exam papers are taken into consideration.
- According to the level of toughness, the questions are prepared (viz., analyzing the problems, implementation of modern tools, formulating the problems etc), which is termed as Bloom's Taxonomy.

Bloom's Taxonomy



- The questions will be of three categories:
- One-third of the questions are straight and can be answered by all students.
- One-third of the questions need analysis and use of content covered as per syllabus.
- Remaining one-third of the questions are not straight. A certain amount of thinking, analysis and mathematical knowledge are required to resolve.

2.2.2.3 Evidence of COs coverage in class test / mid-term tests (5)

- All class test and mid-term test papers cover all topics relevant to COs.
- There is a record of all class test / mid-term test/end semester test to ensure that all the topics are covered in these exams.
- All test papers should be evaluated within a limited time frame.
- HOD/faculty members should ensure that questions which were asked previously should not be repeated.

Mapping of mid-term/end-term question papers with CO's (CAYm3)

Course Code	Course Title	Minor I		Minor II		Major				
		Q1	Q2	Q1	Q2	Q1	Q2	Q3	Q4	Q5
3rd Semester										
ELE-301	Basic Electrical Engineering	CO:1	CO:1,3	CO:1	CO:1,3	CO:4	CO:3,4	CO:4,5	CO:2,3	CO:1,3
4th Semester										
ELE-401	Electric Machines-I	CO:2	CO:2,3	CO:3	CO:3,4	CO:1	CO:1	CO:1	CO:3,4	CO:4,5
ELE-402	Control Systems-I	CO:1	CO:2	CO:2	CO:2	CO:1	CO:1,2,3	CO:3	CO:2	CO:4
ELE-403	Electrical Measurements and Measuring Instruments	CO:1	CO:1	CO:2	CO:1,2	CO:1	CO:1,2	CO:1,2	CO:2	CO:4
5th Semester										
ELE-501	Power Systems – I	CO:1	CO:2	CO:2	CO:2,3	CO:1,3	CO:3	CO:2,3	CO:3	CO:3
ELE-502	Electric Machines-II	CO:1	CO:2	CO:1,2	CO:2	CO:1,3	CO:3	CO:3	CO:2	CO:2
ELE-503	Control System-II	CO:1	CO:1,2	CO:1,2	CO:1,2	CO:1,2	CO:1,2	CO:1,2	CO:1,2	CO:1,2
6th Semester										
ELE-601	Power Systems-II	CO:1,2	CO:2	CO:1	CO:1,2	CO:1,2	CO:2	CO:2	CO:5	CO:3,4,5
ELE-602	Power Electronics	CO:1	CO:3	CO:3	CO:3	CO:1	CO:2,3	CO:3	CO:3	CO:3

ELE-603	Electric Machines Design	CO:1,2	CO:1,2	CO:3	CO:3	CO:2,3	CO:3	CO:2,3	CO:2,3	CO:3
ELE-605	Digital Signal Processing	CO:1	CO: 1,2	CO: 3	CO:2,3	CO:2	CO:1,3	CO:3	CO: 3	CO: 3
ELE-606	Microprocessors	CO:1,2	CO: 1,3	CO: 2	CO: 1,3	CO: 1,3,4	CO: 3	CO: 2,3	CO: 3	CO: 3
7th Semester										
ELE-701	Power System Protection	CO:1	CO:2	CO:2	CO:3,4	CO:3,4	CO:3	CO:1,2	CO:1,2	CO:5
ELE-702	Advanced Power Electronics	CO:1	CO:2	CO:3,4	CO:4,5	CO:1	CO:2	CO:4	CO:4	CO:3,5
ELE-703	Power Systems-III	CO:1	CO:1	CO:1	CO:1	CO:3	CO:2	CO:2	CO:1	CO:1
ELE-704	Power Station Practice	CO:1	CO: 1	CO: 1,2	CO:3,4	CO:1	CO:4	CO:1	CO: 2	CO: 4,5
8th Semester										
ELE-803	High Voltage Engineering	CO:5	CO:5	CO:3	CO:1	CO:5	CO:5	CO:5	CO:1	CO:2,3

Mapping of mid-term/end-term question papers with CO's (CAYm2-spring session)

2016 autumn session has conducted only 1 minor instead of 2 due to some serious issues in the valley.

Course Code	Course Title	Minor I		Minor II		Major					
		Q1	Q2	Q1	Q2	Q1	Q2	Q3	Q4	Q5	
4th Semester											
ELE-401	Electric Machines-I	CO:3	CO:3	CO:4	CO:1	CO:1	CO:1	CO:1	CO:1	CO:3,4	CO:3,4
ELE-402	Control Systems-I	CO:1,2,3	CO:2,3	CO:1	CO:2,3	CO:1	CO:1,2,3	CO:3	CO:2	CO:2	CO:4
ELE-403	Electrical Measurements and Measuring Instruments	CO:1	CO:1,2	CO:1	CO:2,4	CO:1,3	CO:2	CO:2	CO:1,4	CO:1,2	
6th Semester											
ELE-601	Power Systems-II	CO:2	CO:2	CO:2	CO:2	CO:1,2	CO:2	CO:2	CO:3,5	CO:2,3,4	
ELE-602	Power Electronics	CO:1	CO:3	CO:1	CO:1	CO:2,3	CO:3	CO:3,4	CO:3	CO:3	
ELE-603	Electric Machines Design	CO:1,2	CO:2	CO:3	CO:1	CO:1,2	CO:1,3	CO:1,3	CO:2,3	CO:3,1	
ELE-605	Digital Signal Processing	CO:1,2	CO: 3,4	CO: 2,3	CO:2,3	CO:1	CO:3	CO:2,3	CO: 5	CO: 5	
ELE-606	Microprocessors	CO:2,3	CO: 3	CO: 3	CO: 3	CO: 3,4	CO: 3	CO: 2,4	CO: 3	CO: 3	
8th Semester											
ELE-803	High Voltage Engineering	CO:5	CO:5	CO:5	CO:1	CO:5	CO:3,5	CO:1	CO:3	CO:2,3	

Mapping of mid-term/end-term question papers with CO's (CAYm2-Autumn session)

2016 autumn session has conducted only 1 minor instead of 2 due to some serious issues in the valley.

Course Code	Course Title	Mid term			Major				
		Q1	Q2	Q3	Q1	Q2	Q3	Q4	Q5
3rd Semester									
ELE-301	Basic Electrical Engineering	CO:3	CO:3	CO:3	CO:3,4	CO:1,4	CO:4,5	CO:3	CO:3,4
5th Semester									
ELE-501	Power Systems – I	CO:2	CO:3	CO:1,3	CO:1,2	CO:2	CO:3	CO:5	CO:3
ELE-502	Electric Machines-II	CO:1,2	CO:2	CO:2	CO:3	CO:3	CO:3	CO:2	CO:2
ELE-503	Control System-II	CO:1,2	CO:1,2	CO:3	CO:1	CO:1	CO:1	CO:2	CO:3
7th Semester									
ELE-701	Power System Protection	CO:1	CO:2	CO:1,2	CO:3,4	CO:4	CO:2,4	CO:1,2	CO:5
ELE-702	Advanced Power Electronics	CO:1,4	CO:3,4	CO:3,4	CO:1	CO:2	CO:3	CO:4,5	CO:3,5
ELE-703	Power Systems-III	CO:2	CO:1	CO:1	CO:3	CO:2	CO:2	CO:1	CO:3
ELE-704	Power Station Practice	CO: 1	CO: 1	CO:3,4	CO:1,4	CO:1,4	CO:2	CO:1,4	CO:1,5

Mapping of mid-term/end-term question papers with CO's (CAYm1)

Course Code	Course Title	Minor			Major				
		Q1	Q2	Q3	Q1	Q2	Q3	Q4	Q5
3rd Semester									
ELE-301	Basic Electrical Engineering	CO:1,3	CO:3	CO:3	CO:2,3	CO:1,4,5	CO:4,5	CO:4,5	CO:4
ECE-301	Network Analysis and Synthesis	CO:2,4	CO:1,2,3	CO:1,2,3,4	CO:1,3	CO:2,4	CO:3,6	CO:4,5	CO:1
4th Semester									
ELE-401	Electric Machines-I	CO: 1	CO: 1	CO: 1	CO: 1	CO: 2,3	CO: 3	CO: 4	CO:1,4
ELE-402	Control Systems-I	CO:1,2,3	CO:2,3	CO:2	CO:3	CO:2,4	CO:3	CO:3	CO:1,2,4
ELE-403	Electrical Measurements and Measuring Instruments	CO:1	CO:2	CO:2	CO:1	CO:1	CO:4	CO:2,4	CO:2,4
5th Semester									
ELE-501	Power Systems – I	CO:1,2	CO:1,2	CO:1,2	CO:1,3	CO:3	CO:3,5	CO:3	CO:2,3
ELE-502	Electric Machines-II	CO:2	CO:2	CO:2	CO:1,3	CO:3	CO:3	CO:2	CO:2
ELE-503	Control System-II	CO:1	CO:1,2	CO:2	CO:2	CO:2	CO:1,2	CO:2	CO:2
6th Semester									

ELE-601	Power Systems-II	CO:1	CO:2	CO:2	CO:1	CO:2	CO:2,3	CO:5	CO:3,5, 6
ELE-602	Power Electronics	CO:1,3	CO:3	CO:1,3	CO:3,4	CO:3	CO:2,3	CO:3	CO:3
ELE-603	Electric Machines Design	CO:1	CO:2	CO:1,2	CO:1,2	CO:1,3	CO:1,3	CO:3	CO:1,3
ELE-605	Digital Signal Processing	CO: 1	CO: 1,2	CO:3	CO:1,5	CO:3,5	CO:4,5	CO: 3	CO: 3,5
ELE-606	Microprocessors	CO: 1,2,3	CO: 2,3	CO: 1,3	CO: 3,4	CO: 3	CO: 3,4	CO: 3,4	CO: 3
7th Semester									
ELE-701	Power System Protection	CO:1	CO:2	CO:2	CO:3	CO:2,4	CO:2	CO:2	CO:3,4
ELE-702	Advanced Power Electronics	CO:2	CO:2,4	CO:2,4	CO:2,4	CO:2	CO:4	CO:2,4	CO:4
ELE-703	Power Systems-III	CO:1	CO:1	CO:2	CO:3	CO:1	CO:1,2	CO:1	CO:2
ELE-704	Power Station Practice	CO: 5	CO: 5	CO: 1	CO:1,4	CO:3	CO:5	CO: 1	CO: 2
8th Semester									
ELE-803	High Voltage Engineering	CO:5	CO:1,5	CO:5	CO:5	CO:5	CO:1,4	CO:1	CO:3

2.2.2.4 Quality of assignments and its relevance to COs (5)

- Assignment issue and submission dates are announced by the respective faculty members.
- Assignment questions are prepared using Bloom's Taxonomy process.
- Surprise tests, quizzes, video links are provided.
- The faculties after every internal assessment test explain the solution of the questions in the class which will enable them to perform well in the final examination.
- For any genuine reasons, if a student was unable to appear in the given internal assessment opportunity is given in the form of a special test for such students.
- If a candidate remains absent for all the tests conducted, the Internal assessment marks are marked as "Absent" in the result.
- Assignments are used as a tool for practice and evaluation.

Professional Core Courses	ASSIGNMENT		
	Q1	Q2	Q3
Basic Electrical Engineering	CO1	CO2, CO3	CO3
Electric Machines-I	CO3	CO3, CO4	CO2
Control Systems-I	CO2	CO2	CO2
Power Systems-I	CO3	CO1	CO3, CO1
Electrical Measurements and Measuring Instruments	CO1, CO3	CO1, CO2	CO1, CO2
Control System-II	CO1, CO2	CO1, CO2	CO3, CO4
Power Systems-II	CO1, CO2	CO1	CO2, CO5
Power Electronics	CO1, CO2, CO3	CO2, CO3	CO3, CO5
Digital Signal Processing	CO5	CO5	CO5
Microprocessors	CO1	CO1, CO2	CO3
Electric Machines Design	CO1, CO2	CO3	CO1, CO2
Power System Protection	CO1	CO2, CO3	-
Advanced Power Electronics	CO1, CO2	CO2, CO5	CO2, CO3, CO5

Power Systems-III	CO1, CO4	CO2, CO4, CO5	-
Power Station Practice	CO1, CO2	CO4, CO5	CO3

2.2.3 Quality of student projects (20)

- (Quality of the project is measured in terms of consideration to factors including, but not limited to, environment, safety, ethics, cost, type (application, product, research, review etc.) and standards. Processes related to project identification, allotment, continuous monitoring, the evaluation including a demonstration of working prototypes and enhancing the relevance of projects.

2.2.3.1 Identification of projects and allocation methodology to Faculty Members (2)

- Students are divided into groups comprising of 3-4 students.
- Students are directed to submit the abstract of the project proposal to the project co-coordinator.
- The project coordinator evaluates it and if the topic is relevant, forwards it to the evaluation committee.
- Otherwise, the group has to come up with a new project proposal.
- The student also has to submit a time schedule according to which he is planning to complete the work.
- If the abstract is approved, Project area is identified and faculty having specialization in that particular area is assigned to the group of students.
- If the proposal is rejected the group should come up with a new proposal
- Minimum passing marks for the project is 50%.

2.2.3.2 Types and relevance of the projects and their contribution towards the attainment of POs and PSOs (2)

S.No	TITLE	STUDENT NAME	PROJECT GUIDE	RELEVANT PO's and PSO's	ENVIRONMENT	SAFETY	ETHICS	COST
1	CONGESTION MANAGEMENT IN TRANSMISSION LINES USING FACTS DEVICES.	Udham Singh (426/11)	Dr.Aijaz Ahmed	PO1,PO2,PO3, PO4,PO5,PO6, PO10,PO12 PSO1,PSO2	Y	Y	Y	Y
		Priya Sharma (497/11)						
		Kapil Kumar (373/11)						
		Anand Kumar (431/11)						
2	PERFORMANCE ANALYSIS OF DIRECT CONTROLLED INDUCTION MOTOR DRIVE WITH FLUX OF OPTIMIZATION.	Hadhiq Khan (83/11)	Dr. Mohd Abid Bazaz	PO1,PO2,PO3, PO4,PO5,PO9, PSO1,PSO2	Y	Y	Y	Y
		Danish Mushtaq (19/11)						
		Amjad Ali (145/11)						
3	PERFORMANCE INVESTIGATION OF A SINGLE PHASE, UNIDIRECTIONAL AC TO DC BOOST CONVERTER FOR POWER QUALITY IMPROVEMENT.	Ilyas Amin (03/11)	Dr. A.H. Bhat	PO1,PO2,PO3, PO4,PO5,PO9, PSO1,PSO2	Y	Y	Y	Y
		Hailiya Ahsan (29/11)						
		Saira Manzoor (49/11)						
		Stanzin Zangmo (160/11)						
	TRANSIENT STABILITY	Mohd Wasim Shah (47/11)	Dr. M.D. Mufti	PO1,PO2,PO3, PO4, PO5,				

4	ANALYSIS OF MULTI MACHINE POWER SYSTEM(Simulink modeling and graphical animation)	Mudasir ul Amin (13/11)		PO9,PO12,PSO1, PSO2	Y	Y	Y	Y
		Junaid Farooq (126/11)						
5	METER DATA ACQUISITION SYSTEMS.	Mohd. Numaan Rather (43/11)	Dr. Shameem Ahmad Lone	PO1,PO2,PO3, PO5,PO7, PO8,PO9,PSO1, PSO2	Y	Y	Y	Y
		Abdul Waris (70/11)						
6	A TRANSIENT STABILITY TOOL COMBINING THE SIME METHOD WITH MATLAB AND SIMULINK.	Afnan Rafiq (361/12)	Dr. Mairaj ud din Mufti	PO1,PO2,PO3, PO4,PO5,PO9, PO12,PSO1, PSO2	Y	Y	Y	Y
		Aaqib Ali Abaaa (205/12)						
		Faheem Lateef (314/12)						
		Mukund Kumar (184/12)						
		Pradeep Kumar Mishra (151/12)						
7	PROTOTYPE ELECTRIC VEHICLE	Aakash (155/12)	Dr. A.H. BHAT	PO1,PO2,PO3, PO5,PO11,PO9, PO7, PSO1, PSO2,PSO3	Y	Y	Y	Y
		Rahul Bhardwaj (339/12)						
		Ankit Srivastava (391/12)						
		Kuljinder Pal Singh Sethi (313/12)						
8	SINGLE PHASE GRID CONNECTED SOLAR	Tajamul Razaq (23/13)	Dr. Sheikh Javed Iqbal	PO1, PO2, PO3, PO5, PO6, PO7, PO9, PO12, PSO1,				
		Raja Umer						

	PHOTOVOLTAIC SYSTEM.	(30/13)		PSO2, PSO3	Y	Y	Y	Y
		Mahak Gull (45/13)						
		Raja Owais (49/13)						
9	SMART INTEGRATION OF SOLAR PV ARRAY WITH GRID.	Varun Paul (70/13)	Dr.Aijaz Ahmed	PO1, PO2, PO3, PO5, PO6, PO7, PO9, PO12, PSO1, PSO2, PSO3	Y	Y	Y	Y
		Arpit Dixit (54/13)						
		Sahil Chandel (51/13)						
		Naveen Kumar (53/13)						
10	IMPROVEMENT OF LOAD FREQUENCY USING FLYWHEEL ENERGY STORAGE.	Azeem Akbar Drabu(16/13)	Dr. Mairaj ud din Mufti	PO1,PO2,PO3, PO4,PO9, PSO1,PSO2	Y	Y	Y	Y
		Gowher Hussain Wani(24/13)						
		Nuha Bilal (41/13)						
		Sinan Aquib Gull (47/13)						
11	REDUCTION IN HARMONICS AND TORQUE RIPPLES OF BLDC MOTOR BY CASCADED H-BRIDGE MULTILEVEL INVERTER.	Aakash Gupta(34/13)	Dr. A.H. BHAT	PO1,PO2,PO3, PO4,PO9,PO12, PO11,PSO1,PSO2	Y	Y	Y	Y
		Nandeep Kaushal (38/13)						
		Mohd Irfan Malik(48/13)						
		Rahul Kumar Atri (36/13)						

2.2.3.3 Project related to Industry (3)

Some projects are undertaken by students in collaboration with organizations like Power Development Department (PDD), Power Development Corporation (PDC) of Jammu and Kashmir government.

2.2.3.4 Process for monitoring and evaluation (2)

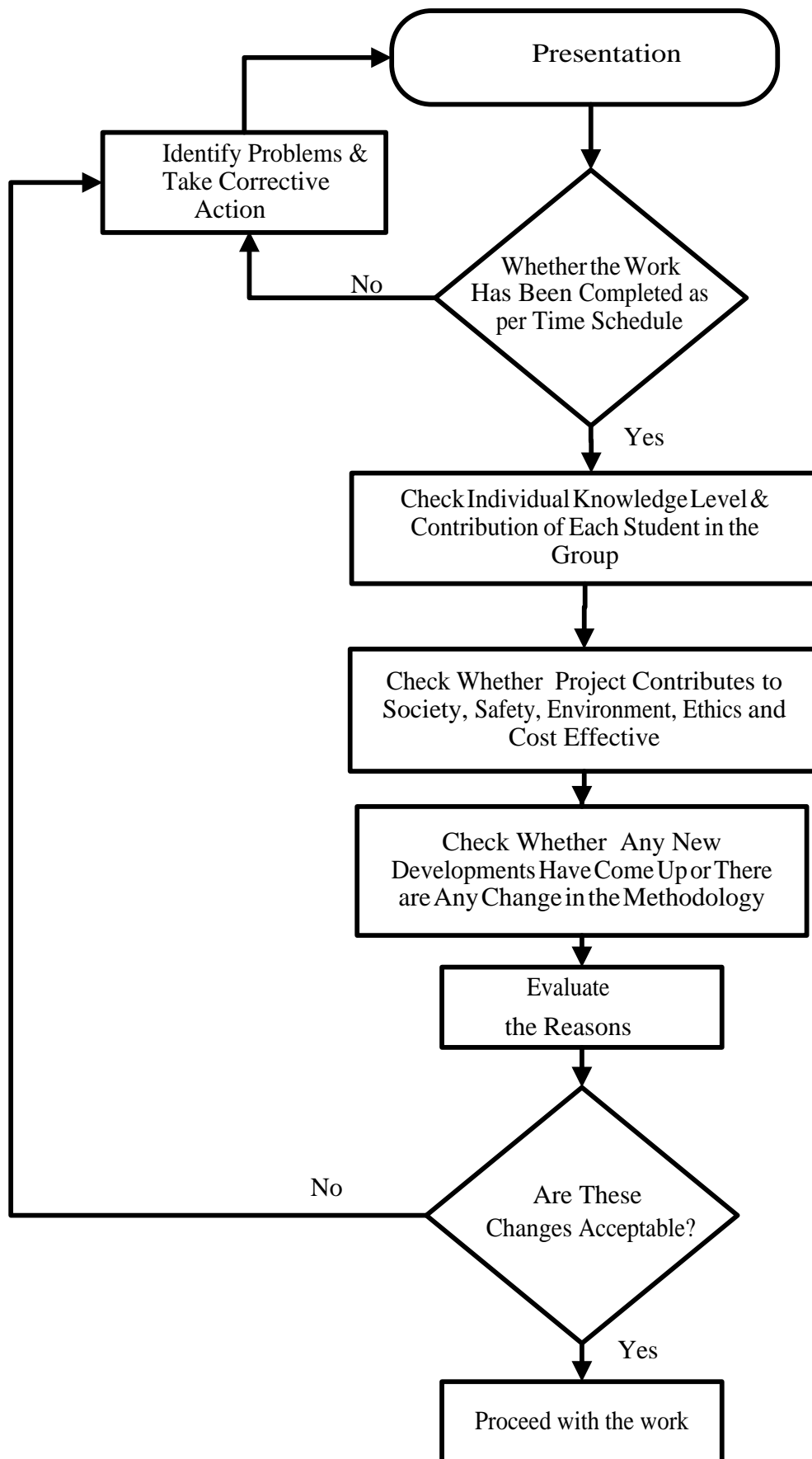
- Students are directed to maintain a project diary to record the activities they do in relation to the project.

- The Project evaluation committee and the project guide together will analyze the nature of the project during the different stages of evaluation and make sure that the work is environment-friendly, ensures safety, ethics and is cost effective.
- The type of the project selected could be an application, product, a review or a research work.
- The projects are classified into different areas and their relevance to PO's and PSO's are identified to ensure its quality.
- Students, with the help of project guide, are encouraged to publish their work in relevant journals.

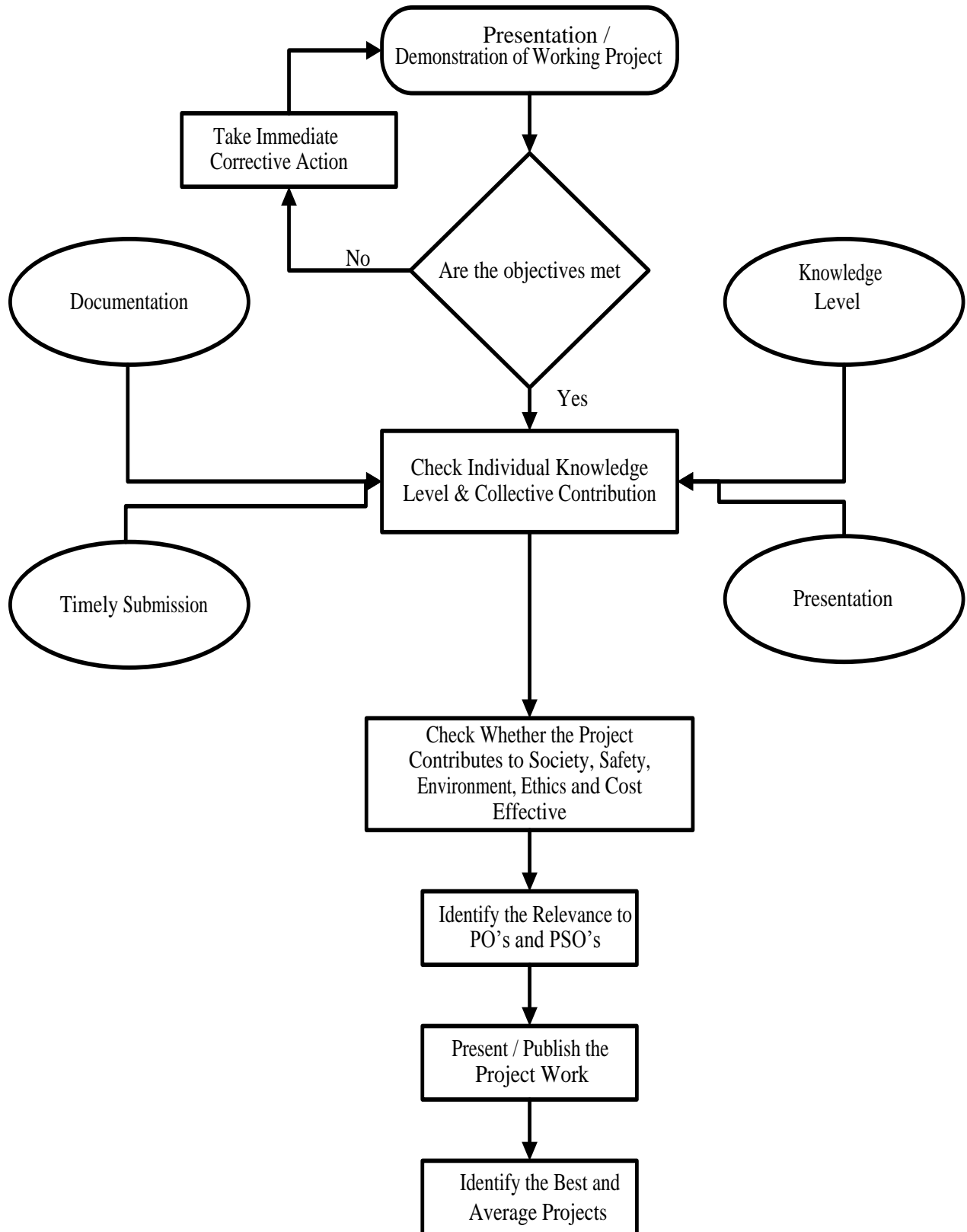
RUBRIC for B.Tech Dissertation (Electrical Department)

FACULTY	MARKS OBTAINED	AREA EXAMINED
EXAMINER	20	Examines the scope and objective of the dissertation, student's knowledge and interpretation of literature. Looks for the methodology and results of the dissertation and also how the topic is being presented.
SENIOR FACULTY OF DEPARTMENT	10	Examines the quality of results obtained and the approach used for it. The way of presentation and knowledge of the topic should be appropriate.
H.O.D (HEAD OF DEPARTMENT)	20	Examines the level of understanding and originality in the analysis of project topic. The writing style and layout of the dissertation should be of good quality, with no or extremely few linguistic and typographical errors.
SUPERVISOR	50	Examines whether the project demonstrates a high level of understanding and originality in the analysis (theoretical and/or empirical). The project topic should make a significant contribution to the knowledge base of the discipline and field of study. The topic should be innovative having the future scope and the results should be appropriate and of high quality.

Process for monitoring:



Evaluation Process:



Members of a project group prepare and submit their report.

- The report records all aspects of the work, highlighting all the problems faced and the approach/method employed to solve such problems.

Final Evaluation			
	Criteria	Marks Awarded	Total
Project Evaluation Committee	Examiner	20	50
	Senior faculty of the department	10	
	Head of the department	20	
Project Guide	Continuous monitoring of performance assessed by the guide	50	50
Total Marks		100	100

2.2.3.5 Process to assess individual and team performance (3)

Individual learning and performance is assessed in the following ways-

Some faculty members add an individual component to group projects (e.g., a short essay, journal entries); some combine a group project with an individual test or quiz. Both group and individual performance are then reflected in the total project grade (e.g., some faculty members make the group grade worth 50% and the individual grade worth 50%; others split it 80%/20%. There's no perfect breakdown, but the grading scheme reflects goals for student learning.

2.2.3.6 Quality of completed projects/working prototypes (5)

Best Projects CAYm3

S. NO	Title of the project	Students	Projects Conducted At	Project Guide
1	CONGESTION MANAGEMENT IN TRANSMISSION LINES USING FACTS DEVICES.	Udham Singh (426/11)	N.I.T. SRINAGAR	Dr.Aijaz Ahmed
		Priya Sharma (497/11)		
		Kapil Kumar (373/11)		
		Anand Kumar (431/11)		
2	PERFORMANCE ANALYSIS OF DIRECT CONTROLLED INDUCTION MOTOR DRIVE WITH FLUX OF OPTIMIZATION.	Hadhiq Khan (83/11)	N.I.T. SRINAGAR	Dr. Mohd Abid Bazaz
		Danish Mushtaq (19/11)		
		Amjad Ali (145/11)		
3	PERFORMANCE INVESTIGATION OF A SINGLE PHASE, UNIDIRECTIONAL AC TO DC BOOST CONVERTER FOR POWER QUALITY IMPROVEMENT.	Ilyas Amin (03/11)	N.I.T. SRINAGAR	Dr. A.H. Bhat
		Hailiya Ahsan (29/11)		
		Saira Manzoor (49/11)		
		Stanzin Zangmo (160/11)		
4	TRANSIENT STABILITY ANALYSIS OF MULTI MACHINE POWER SYSTEM(Simulink modeling and graphical animation).	Mohd Wasim Shah (47/11)	N.I.T. SRINAGAR	Dr. M.D. Mufti
		Mudasir ul Amin (13/11)		
		Junaid Farooq (126/11)		
5	METER DATA ACQUISITION SYSTEMS.	Mohd. Numaan Rather (43/11)	N.I.T. SRINAGAR	Dr. Shameem Ahmad Lone
		Abdul Waris (70/11)		

Best Projects CAYm2

S.NO	Title of the project	Students	Projects Conducted At	Project Guide
1	A TRANSIENT STABILITY TOOL COMBINING THE SIME METHOD WITH MATLAB AND SIMULINK.	Afnan Rafiq (361/12)	N.I.T. SRINAGAR	Dr. Mairaj ud din Mufti
		Aaqib Ali Abaaa (205/12)		
		Faheem Lateef (314/12)		
		Mukund Kumar (184/12)		
		Pradeep Kumar Mishra (151/12)		
2	PROTOTYPE ELECTRIC VEHICLE.	Aakash (155/12)	N.I.T. SRINAGAR	Dr. A.H. BHAT
		Rahul Bhardwaj (339/12)		
		Ankit Srivastava (391/12)		
		Kuljinder Pal Singh Sethi (313/12)		

Best Projects CAYm1

S. NO	Title of the project	Students	Projects Conducted At	Project Guide
1	SINGLE PHASE GRID CONNECTED SOLAR PHOTOVOLTAIC SYSTEM.	Tajamul Razaq (23/13)	N.I.T SRINAGAR	Dr. Sheikh Javed Iqbal
		Raja Umer (30/13)		
		Mahak Gull (45/13)		
		Raja Owais (49/13)		
2	SMART INTEGRATION OF SOLAR PV ARRAY WITH GRID.	Varun Paul (70/13)	N.I.T SRINAGAR	Dr.Aijaz Ahmad
		Arpit Dixit (54/13)		
		Sahil Chandel (51/13)		
		Naveen Kumar (53/13)		

3	IMPROVEMENT OF LOAD FREQUENCY USING FLYWHEEL ENERGY STORAGE.	Azeem Akbar Drabu(16/13)	N.I.T SRINAGAR	Dr. Mairaj ud din Mufti
		Gowher Hussain Wani(24/13)		
		Nuha Bilal (41/13)		
		Sinan Aquib Gull (47/13)		
4	REDUCTION IN HARMONICS AND TORQUE RIPPLES OF BLDC MOTOR BY CASCADED H-BRIDGE MULTILEVEL INVERTER.	Aakash Gupta(34/13)	N.I.T SRINAGAR	Dr. A.H. BHAT
		Nandeep Kaushal (38/13)		
		Mohd Irfan Malik(48/13)		
		Rahul Kumar Atri (36/13)		

Projects Carried Out Outside the College

Best Projects CAYm3

S. NO	Title of the project	Students	Projects Conducted At	Project Guide
1	Meter data acquisition systems.	Mohd. Numaan Rather (43/11)	PDD, J&K	Dr. Shameem Ahmad Lone
		Abdul Waris (70/11)		
2	Energy Audit and accounting.	Mr. Kaisar Jan (381/11)	PDD, J&K	Dr. Shameem Ahmad Lone
		Mr. Ishfaq Majid (90/11)		
		Mr. Arif Hussain Najar (124/11)		

2.2.3.7 Evidences of papers published /Awards received by projects etc. (3)

S. NO	Title of the project	Students	Papers published in	Guide
1	Direct torque control of induction motor drive with flux optimization.	Hadhiq Khan	IEEE	Dr. Mohd. Abid Bazaz
		Shoeb Hussain		

2.2.4 Initiatives related to industry interaction. (10)

2.2.4.1 Industry supported laboratories (2)

None

2.2.4.2 Industry involvement in the program design and Curriculum. (3)

In light of vision and mission of the department, industry involvement in the program design and curriculum are based on following surveys-

1. Alumni survey
2. Students survey
 - i) In-program students
 - ii) Exiting Students
3. Industry
4. Society
5. Parents

2.2.4.3 Industry involvement in the partial delivery of any regular courses for students. (3)

To strengthen interaction with industries and to keep our students updated with the latest trends in Electrical Engineering, the Department undertakes technical visits to industries around and power stations/generating station/ grid stations etc to practice aspects of various course contents.(Course No: PSP- 701P, PSP- 701, PSP -704)

2.2.4.3.1. Implementation

Sl. No	Event	Name of the Organization	Date/ Period	Status
1	ELE 503 P (Experiment No: 6)			Successful
2	2-days workshop on MATLAB	MATHWORKS	5 th to 6 th March 2017	Successful

2.2.4.4 Impact analysis of industry-institute interaction and actions are taken thereof. (2)

- The effectiveness of this practice can be gauged by the great response of the participants of the workshops.
- Students picked up what they learned at the workshops to implement their own mini project and also final year projects.
- Students gained from this exposure to incorporate an entrepreneurial spirit and project-based thinking.
- The students are provided with the feedback forms to rate their industrial training/internship. It is done to identify the level of achievement.
- The feedback is obtained from students at the end of 8th semester to assess the achievement of the objectives of the industrial training/ summer training/internship/industrial tour.

2.2.5 Initiatives related to industry internship/summer training. (10)

2.2.5.1 Industrial training/tours for students (2)

The faculties of the department constantly try to interact with industries like PDC, PDD of J&K Govt, etc. for industrial visit.

Sl. No.	Name of the Site	Date of Visit
1	LOWER JHELUM POWER PROJECT, BARAMULLAH	31/10/2015
2	UPPER SIND HYDEL PROJECT, KANGAN	14/06/2015
3	URI POWER STATION, GINGLE	17/09/2015
4	LOWER JHELUM POWER PROJECT, BARAMULLAH	27/09/2017

2.2.5.2 Industrial /internship /summer training of more than two weeks and post-training Assessment. (3)

The students are encouraged to take up internship programs during their semester break. Faculty members give their guidelines, suggestions and scope and contact details of an internship. They also help the students by interacting with the industry experts, provide the student's recommendation letters and other necessary supports. The alumni coordinator constantly interacts with alumni those who are working in the industries and request them to provide the necessary guidelines and supports for their junior's internship.

SL. NO	NAME OF THE STUDENT	CERTIFICATION /TRAINING DETAILS	ORGANIZATION	DURATION	DATE
1	Adil Mohi-u-Din Bhat (155/11)	In-Plant Training	PGCIL, 400/220 KV Wagoora substation	51 days	26/12/13 to 14/2/14
2	Shahid Hussain Kumar (82/11) Suhail Majeed (122/11)	In-Plant Training	Upper Sind Hydro Electric Stage-II, Kangan	8 weeks	05/02/14
3	Junaid Farooq (126/11)	In-Plant Training	Uri Power Station, Gingle, Baramulla	62 days	15/12/13 to 15/02/14
4	Rajbir Singh (62/11)	In-Plant Training	PGCIL, 400/220 KV Wagoora substation	51 days	26/12/13 to 14/2/14
5	Mr. Mohd Umar Farooq (118/11)	In-Plant Training	200 MVA, 132/33 KV Grid Station Pampore	64 days	13/12/13 to 14/02/14

6	Md. Mozahir Hassan (474/11)	In-Plant Training	IOCL, Barauni Oil Refinery, Begusarai, Bihar	42 days	21/12/13 to 31/01/14
7	Tariq Aziz Sofi	In-Plant Training	BHEL, Haridwar	47 days	16/12/13 to 31/1/14
8	Sh.Aaqib Ali Abbas (205/12)	In-Plant Training	PGCIL, 400/220 KV Wagoora substation	43 days	15/12/14 to 26/01/15
9	Burhanul Majeed (223/12)	In-Plant Training	Lower Jhelum Hydel Project, J&K	64 days	22/12/14 to 24/02/15
10	Abid Hussain Lone	In-Plant Training	132/33 KV Grid Station Wanpoh	46 days	01/01/15 to 15/02/15
11	Gowhar Ahmad Mir (225/12)	In-Plant Training	Lower Jhelum Hydel Project, J&K	64 days	22/12/14 to 24/02/15
12	Gaurangi Gargi Chowdhary (39/15)	In-Plant Training	IISc, Bangalore	53 days	20/12/17 to 10/02/18
13	Aditya Ujjawal (57/15)	In-Plant Training	BHEL, Haridwar	28 days	23/12/17 to 19/1/18
14	Abid Hussain (26/15)	In-Plant Training	Salal power station, Jyotipuram (NHPC Ltd.)	29 days	23/01/18 to 20/02/18
15	Rohit Choor (22/15)	In-Plant Training	DMRC	27 days	13/12/17 to 08/01/18

2.2.5.3 Impact analysis of industrial training (2)

- The purpose of those internships is not only to get acquainted with the culture of companies but also to realize something of importance for the company visited.
- Working in a group within the company, it is expected that the trainee gets a better insight into the practical aspects of the industry.

2.2.5.4 Student feedback on initiative (3)

➤ It is mandatory for all the students who do their industrial training to give feedback on this initiative.

Feedback Form to Assess the Industrial Training									
Name of the student:					Enrolment No :				
1. Rank the departmental initiative about the seriousness regarding industrial training etc.									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>
2. Did the faculty help you in choosing the proper industry?									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>
3. Rank the exposure to the practical working environment.									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>
4. Did you become aware of the practical aspects of the industry?									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>
5. Did you notice some interesting facts and new technologies adopted in the industry?									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>
6. Would you suggest your juniors to undergo training there?									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>
7. Do you want to join this industry as a permanent employee?									
<input type="checkbox"/>	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>

SL.NO	PARTICIPATING STUDENT NAME	INITIATIVE SATISFACTORY	COMMENTS
1	Adil Mohi-u-Din Bhat (155/11)	YES	
2	Shahid Hussain Kumar (82/11)	YES	
3	Junaid Farooq (126/11)	YES	
4	Rajbir Singh (62/11)	YES	
5	Mr. Mohd Umar Farooq (118/11)	YES	
6	Md. Mozahir Hassan (474/11)	YES	
7	Tariq Aziz Sofi	YES	
8	Sh.Aaqib Ali Abbas (205/12)	YES	
9	Burhanul Majeed (223/12)	YES	
10	Abid Hussain Lone	YES	
11	Gowhar Ahmad Mir (225/12)	YES	
12	Gaurangi Gargi Chowdhary (39/15)	YES	
13	Aditya Ujjawal (57/15)	YES	
14	Abid Hussain (26/15)	YES	
15	Rohit Choor (22/15)	YES	

CRITERION 3	COURSE OUTCOMES AND PROGRAM OUTCOMES	175
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Program Specific Outcomes (PSOs)

PSO	Statement
PSO1	Students should be competent, creative and imaginative electrical engineers employable in fields of design, research, manufacturing, safety, quality, technical Services.
PSO2	Students should be able to progress through an advanced degree, certificate programs or participate in continuing education in electrical engineering, business, and other Professionally related fields.
PSO3	Students should take lead in innovation and entrepreneurship activities with high professional standards and moral ethics and prove themselves beneficial to society at large

Program Outcomes (PO's) of the Department

PO1: Engineering Knowledge

Apply the knowledge of governing sciences, mathematics and engineering principles for the solution of electrical engineering problems.

PO2: Problem Analysis

Identify, analyze and solve problems related to Electrical engineering systems.

PO3: Design/Development of solutions

Design an Electrical process to meet the desired needs within the constraints of economics, safety, and sustainability.

PO4: Conduct investigations of Complex Problems

Ability to think independently and creatively to formulate innovative solutions to Electrical engineering problems.

PO5: Modern tool usage

Employ learning and skills of modern tools to analyze and design advanced Electrical engineering processes

PO6: The Engineer and Society

Apply knowledge necessary to assess the impact of engineering solutions in global, environmental, safety and societal context.

PO7: Environment and Sustainability

Competence and creativity to use engineering principles to address energy and environmental challenges.

PO8: Ethics and Professionalism

Upholding ethical values in undertaking professional responsibilities to achieve the desired goals.

PO9: Teamwork and Leadership

Capacity to work proficiently as a team in all-inclusiveness, and to accept the position of responsibility, accountability, and leadership, with a tolerance for ambiguity.

PO10: Communication Skills

Articulate and interpretable communication abilities, both oral and written, to deliver and express solutions, strategies, instructions, and opinions.

PO11: Project Management and Finance

Employ proper managerial and financial skills to the field of Electrical engineering.

PO12: Life Long Learning

Embody an urge to pursue life-long learning, which advances the understanding of Electrical engineering and allied areas and keep pace with the contemporary technology.

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs): (25)

3.1.1 Evidence of Course Outcomes (COs): (5)

S.NO	Course	COURSE OUTCOMES	
1	ELE-301 Basic Electrical Engineering	CO.1	To Analyse and evaluate the Electric circuit concepts, basic laws in circuit theory and to determine Electric circuit parameters.
		CO.2	To identify and analyze various Energy sources and their transformation
		CO.3	Power and energy relations, Analysis of series-parallel D.C. Circuits and network theorem along with applications
		CO.4	Analysis of ac circuits, network theorems in ac circuits and understanding the concept of active and reactive power
		CO.5	To study the characteristics of 3 phase systems, Current and voltage relations in star/delta configuration's, Balanced/unbalanced systems.
2	ELE-401 Electric Machines-I	CO.1	Detailed study of Transformers construction, operation, phasor analysis, equivalent circuit models, various tests performed and finding the efficiency of operation.
		CO.2	Study the principles of electromechanical energy conversions.
		CO.3	Construction and principle of operation of DC machines, formulating emf and torque calculations.
		CO.4	To compare the Characteristics of various types of DC generators and motors, discuss starting and braking of DC motors.
		CO.5	Compare and contrast various types of DC motors for various domestic and commercial applications.
3	ELE-501 Power System-I	CO.1	Understand the basic of power systems generation, transmission & distribution
		CO.2	Classification of overhead line insulators and evaluation of string efficiency.
		CO.3	Modeling, design, and evaluation of various parameters of transmission lines.
		CO.4	Acquire knowledge of underground cables, its construction, methods of laying, its grading and fault location.
		CO.5	Investigate the concept of corona and its effect on line design.
4	ELE-601 Power System-II	CO.1	Acquire and apply the knowledge of Per unit representation of Power system.
		CO.2	Analysis of faults, balanced faults & Un-balanced faults.
		CO.3	Investigate the concept of Insulation co-ordination, over voltage, lightning surges, switching surges and switching operations.
		CO.4	Analysis of interference of power line with a communication circuit

		CO.5	Analysis of surge performance of transmission lines and Explain the knowledge of HVDC & FACTS Technology.
5	ELE-702-Advanced Power Electronics	CO.1	Investigating modern self-commutating power semiconductor devices
		CO.2	Analysis of three-phase voltage source and current source inverters and their modulation strategies.
		CO.3	Study and design of switched mode power supplies.
		CO.4	Study of switched mode and isolated DC-DC converter.
		CO.5	Gain knowledge of power line disturbances and various power conditioners.
6	ELE-803 -High Voltage Engineering	CO.1	Explain conduction and breakdown in gases, liquid, and solid dielectrics
		CO.2	Understand the application of insulating materials in electrical and electronic equipment's.
		CO.3	Understand the phenomenon of generation of high voltages and currents.
		CO.4	Understand various methods of measurement of high voltages and currents.
		CO.5	Understand various methods of non-destructive testing and Gain knowledge of testing of electrical apparatus.

3.1.2 Availability of Cos embedded in the syllabi (5)

The COs are published at

- Institute Website
- Information Brochure
- Newsletters
- Reports
- Notice Boards

3.1.3 Explanation of Course Articulation Matrix table to be ascertained: (5)

The various levels of correlation are used as:

- 1) Stronger correlation -‘3’ 2) Moderate correlation-‘2’ 3) Low correlation-‘1’

3.1.3.1 CO-PO matrices of courses selected in 3.1.1

Table 3.1.3.1 CO-PO Mapping of selected courses

Course	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO
	CO	1	2	3	4	5	6	7	8	9	10	11	12
ELE-301 Basic Electrical Engineering	CO.1	3	3	3	2	3	2	2	1	2	1	1	3
	CO.2	3	3	3	3	3	2	1		2		2	3
	CO.3	3	3	3	2	3	1	2	2	1	2	2	3
	CO.4	3	3	2	2	2	3	2	3	3	3	2	3
	CO.5	3	3	3	2	3	2	2	3	2	3		3
	CO	3	3	2.8	2.6	2.8	2	1.8	1.8	2	1.8	1.4	3
ELE-401 Electric Machines-I	CO.1	3	3	3	3	3	1	2	1	3	2	1	3
	CO.2	3	3	3	3	3	2	3		3		2	3
	CO.3	3	2	3	3	3	2		2	2	1	1	3
	CO.4	3	3	3	3	3	2	3	2	3	1	1	3
	CO.5	3	2	3	3	2	2	3	2	2	2	2	3
	CO	3	2.6	3	3	2.8	1.8	2.2	1.4	2.6	1.2	1.2	3
ELE-501 Power System-I	CO.1	3	3	3	2	3	2	2	1	2	1	1	3
	CO.2	3	3	3	3	3	2	1		2		2	3
	CO.3	3	3	3	2	3	1	2	2	1	2	2	3
	CO.4	3	3	2	2	2	3	2	3	3	3	2	3
	CO.5	3	3	3	2	3	2	2	3	2	3		3
	CO	3	3	2.8	2.6	2.8	2	1.8	1.8	2	1.8	1.4	3
Power System-II	CO.1	3	3	3	2	3	3		3	2	2	3	3
	CO.2	3	3	3	3	3	3	3		3	2	3	3
	CO.3	3	3	3	3	3	3	3	2	3	2	3	3
	CO.4	3	2	3	3	3	2				2	2	3
	CO.5	3	3	3	2	3	3			3	2	3	3
	CO	3	2.8	3	2.6	3	2.8	1.2	1	1.2	2	2.8	3
ELE-702-Advan	CO.1	3	3		2	3	1	2	1	2	1	3	2
	CO.2	3	3	2	2	3	2	3		2		3	1

	CO.3	3	2	3	2	3	3	3	1	2		2	3
	CO.4	3	2	3	3	3	1	3	1	2	3	2	3
	CO.5	3	3	1	3	3	2	2	2	2	1	3	3
	CO	3	2.6	1.8	2.4	3	1.8	2.6	1	2	1	2.6	2.4
ELE-803-High Voltage Engineering	CO.1	3	3	2	-	-	2	-	2	-	-	-	2
	CO.2	3	3	3	2	2	2	-	2	-	-	-	2
	CO.3	3	3	3	2	2	-	-	2	-	-	-	2
	CO.4	3	3	3	2	3	2	2	2	-	-	-	2
	CO.5	3	3	-	-	-	-	-	-	2	2	-	2
	CO	3	3	2.2	1.2	1.4	1.2	0.4	1.6	0.4	0.4	-	2

3.1.3.2 CO-PSO matrices of courses selected in 3.1.1

Table 3.1.3.2 CO-PSO Mapping of selected courses

Course	PSO CO	PSO1	PSO2	PSO3
ELE-301 Basic Electrical Engineering	CO.1	3	2	2
	CO.2	3	2	3
	CO.3	3	3	3
	CO.4	3	2	3
	CO.5	3	3	2
	CO-ELE301	3	2.4	2.6
ELE-401 Electric Machines-I	CO.1	3	3	3
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	3	3	3
	CO-ELE-401P	3	3	3
ELE-501 Power System-I	CO.1	3	3	3
	CO.2	3	3	2
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	3	3	3
	CO-ELE-501	3	3	2.8

ELE-601 Power System-II	CO.1	3	3	3
	CO.2	3	3	1
	CO.3	3	3	3
	CO.4	3	2	3
	CO.5	3	3	3
	CO-ELE-601	3	2.8	2.6
ELE-702 Advanced Power Electronics	CO.1	3	3	2
	CO.2	3	3	3
	CO.3	3	2	3
	CO.4	3	3	3
	CO.5	3	3	3
	CO-ELE-702	3	2.8	2.8
ELE-803 High Voltage Engineering	CO.1	2	2	2
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	2	2	2
	CO-ELE-803	2.6	2.6	2.6

**3.1.4 Explanation of Program Articulation Matrix tables to be ascertained:
(10)**

Course Code Course Name	COs	Programme Outcomes											
		1	2	3	4	5	6	7	8	9	10	11	12
ELE-301 BASIC ELECTRICAL ENGINEERING	CO1	3	3	3	2	3	2	2	1	2	1	1	3
	CO2	3	3	3	3	3	2	1		2		2	3
	CO3	3	3	3	2	3	1	2	2	1	2	2	3
	CO4	3	3	2	2	2	3	2	3	3	3	2	3
	CO5	3	3	3	2	3	2	2	3	2	3		3
	CO	3	3	2.8	2.6	2.8	2	1.8	1.8	2	1.8	1.4	3
	CO1	3	3	3	3	3	1	3	1	3	2	2	3
ELE-301P BASIC ELECTRICAL ENGINEERING LAB	CO2	3	3	3	2	3	2	3		2	2	2	3
	CO3	3	3	3	3	1		2	2	3	2	1	3
	CO4	3	3	3	3	3	2	3	2	3		3	3
	CO5	3	3	3	1	3	2	3	2	1	3		3
	CO	3	3	3	2.33	2.6	1.33	2.8	1.33	2.33	2	1.67	3
	CO1	3	3	3	3	2	2	3	1	3		1	3
ECE-301 Network Analysis and Synthesis	CO2	3	3	3	3		2	2		3	3	2	3
	CO3	3	3	3	3		2	2		3	2	2	3
	CO4	3	3	3	3	3	3	3	2	3	3	1	3
	CO5	3	2	3	2	3	1	3	2	2	3	1	2
	CO	3	2.8	3	2.8	1.6	2	2.6	1	2.8	2.2	1.4	2.8
	ECE-302 Analog Electronics-I	CO1	3	2	3	2	3	3	2	2	3	2	3
CO2		3	2	3	2	3	2	2	2		2	1	2
CO3		3	3	3	3	3	3	2		3	2	3	3
CO4		3	3	3	3	3	3	3	3	2	3	2	3
CO5		3	2.5	3	2.5	3	2.75	2.25	1.75	1.75	2.25	2.25	2.5

ECE-302P Analog Electronics-I-lab	CO1	3	1	3	3	3	2	2	1	3	2	3	2
	CO2	3	2	3	3	3	3	2	1			3	3
	CO3	3	2	3	3	3	2	3		2		3	2
	CO4	3	3	3	3	3	3	3		1	3	2	3
	CO5	3	2	3	3	3	2	3	2		3	3	2
	CO	3	2.14	3	3	3	2.42	2.57	1	1.57	1.57	2.71	2.42
MTH-301 Mathematics-III	CO1	3	3	2	3	2	1	2	2	2	1	2	2
	CO2	3	3	2	3	3	1	3	2	3	2	2	3
	CO3	3	3	2	3	3	2	2	2	2		3	3
	CO	3	3	2	3	2.33	1.33	2.33	2	2.33	1	2.33	2.33
MECH-ELE Thermal Engineering	CO1	3	2	2		2	2	1	2	2	2	2	2
	CO2	3	2	1	3			2	2	3		3	2
	CO3	3	2	1	1	3	2	2		3	3	3	2
	CO4	3	3	2	2	3	1	2	1	3	1	3	3
	CO	3	2.25	1.5	1.5	2	1.25	1.75	1.25	2.75	1.5	2.75	2.25
PHY-303 Electromagnetic fields and waves	CO1	3	3	1	2			2	1			1	2
	CO2	3	3	1	2			1	1			2	2
	CO3	3	2	1	2			2	3			2	2
	CO4	2	3	1	3			2				1	3
	CO5	2	3	2	2			2				2	3
	CO	2.6	2.8	1.2	2.2			1.8	1			1.6	2.4
MET-302 Electrical Engineering Materials	CO1	3	2	3		2	3	2	2		2	2	3
	CO2	3	2	3	2		3	2	2		2	2	3
	CO3	2	2	3	1	1	2	1	2		1	1	3
	CO	2.6	2	3	1	1	2.67	1.6	2		1.6	1.6	3
ELE-401 Electrical Machines-I	CO1	3	3	3	3	3	1	2	1	3	2	1	3
	CO2	3	3	3	3	3	2	3		3		2	3
	CO3	3	2	3	3	3	2		2	2	1	1	3
	CO4	3	3	3	3	3	2	3	2	3	1	1	3
	CO5	3	2	3	3	2	2	3	2	2	2	2	3
	CO	3	2.6	3	3	2.8	1.8	2.2	1.4	2.6	1.2	1.2	3

ELE-402 Control System-I	CO1	3	3	3	3	3	1	3	1	3	2	2	3
	CO2	3	3	3	2	3	2	3		2	2	2	3
	CO3	3	3	3	3	1		2	2	3	2	1	3
	CO4	3	3	3	3	3	2	3	2	3		3	3
	CO5	3	3	3	1	3	2	3	2	1	3		3
	CO	3	3	3	2.4	2.6	1.4	2.8	1.4	2.4	1.8	1.6	3
ELE-403 Electrical Measurements and Measuring Instruments	CO1	3	2	3	2	3	3	2	2	3	2	3	2
	CO2	3	2	3	2	3	2	2	2		2	1	2
	CO3	3	3	3	3	3	3	2		3	2	3	3
	CO4	3	3	3	3	3	3	3	3	2	3	2	3
	CO	3	2.5	3	2.5	3	2.75	2.25	1.75	1.75	2.25	2.25	2.5
ECE-402 Analog Electronics-II	CO1	3	2	1	2		2	3		1	2	1	2
	CO2	3	3	3	3	2	3	3		3		2	3
	CO3	3	3	3	3	3	3	3		3	3	2	3
	CO4	3	3	3	1	2	1	3		3	1	2	3
	CO5	3	3	2		3		3		2	3		3
	CO	3	2.8	2.4	1.8	2	1.8	3		2.4	1.8	1.4	2.8
ELE-501 Power System-I	CO1	3	3	3	2	3	2	2	1	2	1	1	3
	CO2	3	3	3	3	3	2	1		2		2	3
	CO3	3	3	3	2	3	1	2	2	1	2	2	3
	CO4	3	3	2	2	2	3	2	3	3	3	2	3
	CO5	3	3	3	2	3	2	2	3	2	3		3
	CO	3	3	2.8	2.6	2.8	2	1.8	1.8	2	1.8	1.4	3
ELE-501P Power System-I Lab	CO1	3	3	3	2	3	2	1	2	2	1	3	3
	CO2	3	2		2	2	3	2		3	1	2	3
	CO3	3	3	3	2	3	3	2	3	3	1	3	3
	CO	3	2.67	2	2	2.67	2.6	1.66	1.66	2.33	1	2.67	3
ELE-502 Electric Machines-II	CO1	3	2	3		2	3	2	2		2	2	3
	CO2	3	2	3	2		3	2	2		2	2	3
	CO3	2	2	3	1	1	2	1	2		1	1	3
	CO	2.6	2	3	1	1	2.67	1.6	2		1.6	1.6	3
ELE-502P Electric	CO1	3	3	2	3	3	2	2	3	2	2	3	3
	CO2	3	3	2	3	3	2	2		2		3	3

	C03	3	1	3	3	1		1		3	3	3	3
	C04	2	1	3	2	1	2	1	2	3		2	3
	C05	3	2	3	3	2	3	2	3	3	3	3	3
	CO	2.7	1.875	2.25	2.7	1.87	2	1.37	1.75	2.25	1.625	2.7	3
ELE-503 Control system-II	C01	3	3	3	2	3	2	2	1	2	1	1	3
	C02	3	3	3	3	3	2	1		2		2	3
	C03	3	3	3	2	3	1	2	2	1	2	2	3
	C04	3	3	2	2	2	3	2	3	3	3	2	3
	C05	3	3	3	2	3	2	2	3	2	3		3
	CO	3	3	2.8	2.6	2.8	2	1.8	1.8	2	1.8	1.4	3

ELE-504 Computer Aided Simulation	C01	3	3	2	2	3	3	2	2		3	2	2
	C02	3	2	3	2	3	2	3	2		3	2	3
	C03	3	2	2	2	3	2	3	2		3	3	3
	CO	3	2.3	2.3	2	3	2.3	2.6	2		3	2.3	2.67
ECE-508 Communication systems	C01	3	3	3	3	3	1	3	1	3	2	2	3
	C02	3	3	3	2	3	2	3		2	2	2	3
	C03	3	3	3	3	1		2	2	3	2	1	3
	C04	3	3	3	3	3	2	3	2	3		3	3
	C05	3	3	3	1	3	2	3	2	1	3		3
	CO	3	3	3	2.33	2.66	1.33	2.8	1.33	2.33	2	1.67	3
ECE-509 Digital Electronics and Logic Design	C01	3	2	3	3	3	1	3	1	3	2	2	3
	C02	3	3	3	2	3	2	3		2	2		3
	C03	3	3	3	3	1		2	2	3	2	3	3
	C04	3	3	3	3	3	2	3	2	3		3	2
	C05	3	3	3	1	3	2	3	2	1	3		3
	CO	3	2.67	3	2.33	2.66	1.33	2.8	1.33	2.33	2	1.66	2.66
ECE-509P Digital Electronics and Logic Design Lab	C01	3	3	2	3	3			2	2	3	1	3
	C02	3	3	3	3	3	2	3			3		3
	C03	3	3	3	3	3	3	3	3		2	1	3
	C04	3	3	3	3	3	2						2
	C05	2	1	3	1	2		2	3	3		1	2
	CO	2.8	2.4	2.5	2.4	2.8	1.1	2	1.7	1	1.7	1	2.7

MTH-503 Mathematics-V	CO1	2	1	3	2	3	2	2	1	2	1	1	3
	CO2	3	3	3	3	3	2	1		2		2	3
	CO3	2	3	3	2	3	1	2	2	1	2	2	3
	CO4	2	1	2	2	2	3	2	3	3	3	2	3
	CO5	2	2	3	2	3	2	2	3	2	3		3
	CO	2.2	2	2.8	2.6	2.8	2	1.8	1.8	2	1.8	1.4	3
ELE-601 Power System-II	CO1	3	3	3	3	3	1	3	1	3	2	2	3
	CO2	3	3	3	2	3	2	3		2	2	2	3
	CO3	3	3	3	3	1		2	2	3	2	1	3
	CO4	3	3	3	3	3	2	3	2	3		3	3
	CO5	3	3	3	1	3	2	3	2	1	3		3
	CO	3	3	3	2.4	2.6	1.4	2.8	1.4	2.4	1.8	1.6	3
ELE-601P Power System-II Lab	CO1	3	1	3		3	2	2	3	3	1	3	2
	CO2	3	3	3	2	3	3		3	3	1	3	3
	CO3	2	3	3	3	2	3	3	3	2	1	2	3
	CO4	3	2	3	3	3	1	2	2	3	2	2	3
	CO5	3	2	3	3	3	2	2	2	3	3	2	2
	CO	2.8	2.2	3	2.2	2.8	2.2	2	2.6	2.8	1.6	2.4	2.6
ELE-602 Power Electronics	CO1	3	3	3	2	3	3		3	2	2	3	3
	CO2	3	3	3	3	3	3	3		3	2	3	3
	CO3	3	3	3	3	3	3	3	2	3	2	3	3
	CO4	3	2	3	3	3	2				2	2	3
	CO5	3	3	3	2	3	3			3	2	3	3
	CO	3	2.8	3	2.6	3	2.8	1.2	1	1.2	2	2.8	3
ELE-602P Power Electronics Lab	CO1	3	2	3	3	3	1	3	1	3	2	2	3
	CO2	3	3	3	2	3	2	3		2	2		3
	CO3	3	3	3	3	1		2	2	3	2	3	3
	CO4	3	3	3	3	3	2	3	2	3		3	2
	CO5	3	3	3	1	3	2	3	2	1	3		3
	CO	3	2.67	3	2.33	2.66	1.33	2.8	1.33	2.33	2	1.66	2.66
ELE-603 Electric Machine Design	CO1	3	2	3		2	3	2	2		2	2	3
	CO2	3	2	3	2		3	2	2		2	2	3
	CO3	2	2	3	1	1	2	1	2		1	1	3
	CO4	2.6	2	3	1	1	2.67	1.6	2		1.6	1.6	3
	CO	3	2	3		2	3	2	2		2	2	3

ELE-604 Tour & Training	CO1	3	2	1	3	3	3	2	2	3	2	2	3
	CO2	3	3	1	2	3	2	2	1	1	2	2	3
	CO3	2	2	-	-	-	3	3	2	-	-	2	3
	CO	2.67	2.33	0.67	1.67	2	2.67	2.33	1.67	1.33	1.33	2	3
ELE-605 Digital Signal Processing	CO1	3	3		2	3	1	2	1	2	1	3	2
	CO2	3	3	2	2	3	2	3		2		3	1
	CO3	3	2	3	2	3	3	3	1	2		2	3
	CO4	3	2	3	3	3	1	3	1	2	3	2	3
	CO5	3	3	1	3	3	2	2	2	2	1	3	3
	CO	3	2.6	1.8	2.4	3	1.8	2.6	1	2	1	2.6	2.4
ELE-606 Micro-processors	CO1	3	2	3	2	3	3	2	2	3	2	3	2
	CO2	3	2	3	2	3	2	2	2		2	1	2
	CO3	3	3	3	3	3	3	2		3	2	3	3
	CO4	3	3	3	3	3	3	3	3	2	3	2	3
	CO	3	2.5	3	2.5	3	2.75	2.25	1.75	2	2.25	2.25	2.5
ELE-606P Micro-processor Lab	CO1	3	1	3	3	3	2	2	1	3	2	3	2
	CO2	3	2	3	3	3	3	2	1			3	3
	CO3	3	2	3	3	3	2	3		2		3	2
	CO4	3	3	3	3	3	3	3		1	3	2	3
	CO5	3	2	3	3	3	2	3	2		3	3	2
	CO	3	2.14	3	3	3	2.42	2.57	1	1.57	1.57	2.71	2.42
ELE-701- Power System Protection	CO1	3	3	3	2	3		2	2	3		2	1
	CO2	3	3	3	1	3	3	2	3		3	1	2
	CO3	3	2	3	2	2	3		3	2	2	1	2
	CO4	3	3	3	2	3		2	3	1	2	2	2
	CO5	3	3	3	3	3	2	3	3		2	2	3
	CO	3	2.8	3	2	2.8	1.6	1.8	2.8	1.2	1.8	1.6	2
ELE-706P Project Preliminary work/Seminar	CO1	3	3	-	2	-	-	-	-	-	-	-	2
	CO2	-	-	-	-	-	-	-	-	-	3	-	-
	CO	1.5	1.5	-	1	-	-	-	-	-	1.5	-	1
ELE 701P – Power System Protection Laboratory	CO1	3	1	3	2	3	2	1			2	1	3
	CO2	3	2	3	3	3	3	2			2	3	3
	CO3	3	3	3	3		3	1	3	3		1	
	CO4	3	2	3	2	2	2	1	3	1	3	3	2
	CO	3	2	3	2.5	2	2.5	1.25	1.5	1	1.75	2	2

ELE-702- Advanced Power Electronics	C01	3	3		2	3	1	2	1	2	1	3	2
	C02	3	3	2	2	3	2	3		2		3	1
	C03	3	2	3	2	3	3	3	1	2		2	3
	C04	3	2	3	3	3	1	3	1	2	3	2	3
	C05	3	3	1	3	3	2	2	2	2	1	3	3
	CO	3	2.6	1.8	2.4	3	1.8	2.6	1	2	1	2.6	2.4
ELE-703- Power Systems III	C01	3	3		2	3	1	2	3	2	3	3	2
	C02	3	3	2	2	3	2	3		2		3	1
	C03	3	2	3	2	3	3	3	1	2		2	3
	C04	3	2	3	3	3	1	3	3	2	3	2	3
	C05	3	3	1	3	3	2	2	2	2	1	3	3
	CO	3	2.6	1.8	2.4	3	1.8	2.6	2.25	2	1.4	2.6	2.4
ECE-708- Electronic Measurements and instrumentation	C01	3	1	3	3	3	2	2	1	3	2	3	2
	C02	3	2	3	3	3	3	2	1			3	3
	C03	3	2	3	3	3	2	3		2		3	2
	C04	3	3	3	3	3	3	3		1	3	2	3
	C05	3	2	3	3	3	2	3	2		3	3	2
	CO	3	2.14	3	3	3	2.42	2.57	1	1.57	1.57	2.71	2.42
ELE-708P- Electronic Measurements and Instrumentation Laboratory	C01	3	2	3	2	3	2		1	2	3	2	3
	C02	3	1	3				3	3	2		2	3
	C03	3	2		2	3	3		1	2	3	2	
	C04	3	2	2	2	2	3	2		2	2		2
	C05	3	3	3			1	1	1	2	1	1	3
	CO	3	2	2.33	1	1.5	1.5	1.3	1	2	1.5	1.33	2.33
ELE-704- Power Station Practice	C01	3	2	3		2	3	2	2	3	1	2	3
	C02	3	2	3	3	3	3	3	2	3	1	1	3
	C03	3	2	3	3		2	3		3	1	2	2
	C04	3	2	3	1		3	3	3		1	2	3
	C05	3	1	3		3	3	3	3	1	1	1	3
	CO	3	1.8	3	1.4	1.8	2.8	2.8	2	2	1	1.6	2.8
HSS-701- General Management and Economics	C01							3	3	3	3	2	3
	C02							3	3	3	3	2	3
	C03							3	3	3	3	2	3

ELE-803 High Voltage Engineering	CO1	3	1	3	3	2	1			2		2	3
	CO2	3	1	3	3	1	1			2		3	3
	CO3	3	3	3	2	2	-	-	2	-	-	-	2
	CO4	3	3	3	2	3	2	2	2	-	-	-	2
	CO5	3	3	-	-	-	-	-	-	2	2	-	2
	CO	3	2.2	2.4	2	1.6	0.8	0.4	0.8	1.2	0.4	-	2.4
ELE-802 Major Project	CO1	-	-	-	-	-	3	3	2	-	-	-	-
	CO2	3	2	3	3	-	-	-	-	-	-	-	-
	CO3	3	3	3	3	3	3	-	-	-	-	-	-
	CO4	2	-	1	-	-	-	-	-	-	-	-	-
	CO5	2	1.25	1.75	1.5	0.75	1.5	0.75	0.5	-	-	-	-
ELE-9/E- MAINTENANCE & DESIGN OF ELECTRICAL SUB STATIONS	CO1	3	2	2	2	3	-	-	-	-	-	-	3
	CO2	3	2	2	2	3	-	-	-	-	-	-	3
	CO3	3	3	3	2	2	1	-	-	-	-	-	3
	CO4	3	3	3	3	3	-	-	-	-	-	-	3
	CO5	3	1	1	1	1	-	-	-	-	-	-	3
	CO	3	2.2	2.2	2	2.4	0.2	-	-	-	-	-	3
ELE-11/E- UTILIZATION AND TRACTION	CO1	3	3	3	3	3	2	-	-	-	-	-	3
	CO2	3	3	3	3	3	3	2	-	-	-	-	3
	CO3	3	2	2	1	1	3	-	-	-	-	-	3
	CO4	3	3	3	3	3	3	-	-	-	-	-	3
	CO	3	2.75	2.75	2.5	2.5	2.75	0.5	-	-	-	-	3
EEM-110- Power Systems Restructuring and Deregulation	CO1	3	3	1	3	1	3	-	-	-	-	-	3
	CO2	3	3	3	3	1	3	-	-	-	-	-	3
	CO3	3	3	1	3	1	3	2	-	-	-	-	3
	CO	3	3	1.67	3	1	3	0.67	-	-	-	-	3

Course	PSO	PSO1	PSO2	PSO3
ELE-301 Basic Electrical Engineering	CO			
	CO.1	3	2	2
	CO.2	3	2	3
	CO.3	3	3	3
	CO.4	3	2	3
	CO.5	3	3	2
CO-ELE301	3	2.4	2.6	

ELE-301P Basic Electrical Engineering L/AB	CO.1	3	2	3
	CO.2	3	3	3
	CO.3	3	1	1
	CO.4	3	3	2
	CO.5	3	3	2
	CO-ELE301P	3	2.8	2.8
ECE-301 Network Analysis and Synthesis	CO.1	3	3	2
	CO.2	3	3	2
	CO.3	3	1	3
	CO.4	3	2	2
	CO.5	3	2	1
	CO-301	3	2.2	2
ECE-302 Analog Electronics-I	CO.1	3	2	2
	CO.2	3	2	2
	CO.3	3	2	3
	CO.4	3	2	3
	CO-302	3	2	2.5
MTH-301 Mathematics-III	CO.1	3	2	1
	CO.2	3	3	1
	CO.3	3	2	1
	CO-301	3	2.33	1

PHY-303 Electromagnetic fields and waves	CO.1	3	2	3
	CO.2	3	3	3
	CO.3	3	3	2
	CO.4	3	3	3
	CO.5	3	2	2
	CO-303	3	2.6	2.6
MECH-ELE Thermal Engineering	CO.1	3	2	2
	CO.2	3	2	2
	CO.3	3	3	3
	CO.4	3	3	3
	CO-MECH	3	2.5	2.5
CIV-401 Hydraulics and Hydraulic Machines	CO.1	3	2	3
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	2	3	2

	CO.5	3	2	3
	CO-401	2.8	2.6	2.8
MTH-402 Mathematics-IV	CO.1	3	2	3
	CO.2	3	2	3
	CO.3	3	3	2
	CO.4	3	3	3
	CO-402	3	2.5	2.75
ELE-401 Electric Machines-I	CO.1	3	3	3
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	3	3	3
	CO-ELE-401P	3	3	3

ELE-401P Electric Machines-I Lab	CO.1	3	2	3
	CO.2	3	2	3
	CO.3	3	1	2
	CO.4	3	2	3
	CO.5	3	2	2
	CO-ELE-401P	3	2	2.71
ELE-403 Electrical Measurements	CO.1	3	3	3
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	3
	CO-ELE403	3	3	3
ELE-403P Electrical Measurements LAB	CO.1	3	2	3
	CO.2	3	3	3
	CO.3	3	1	1
	CO.4	3	2	2
	CO.5	3	1	2
	CO-ELE-403P	2.83	2	2.8
ELE-402 Control System-I	CO.1	3	2	3
	CO.2	3	3	3
	CO.3	3	1	1
	CO.4	3	3	2
	CO.5	3	3	2
	CO-402	3	2.4	2.2
ELE-501 Power System-I	CO.1	3	3	3
	CO.2	3	3	2
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	3	3	3
	CO-ELE-501	3	3	2.8

ELE-501P Power System-I LAB	CO.1	3	2	2
	CO.2	3	2	2
	CO.3	3	3	2
	CO-EE501P	3	2.33	2
ELE-502 Electrical Machines-II	CO.1	3	2	2
	CO.2	3	2	1
	CO.3	3	2	2
	CO-ELE-502	3	2	1.6
ELE-502P Electrical Machines-II Lab	CO.1	3	2	1
	CO.2	3	2	2
	CO.3	3	1	1
	CO.4	3	2	3
	CO.5	3	3	3
	CO-ELE-502P	2.75	2.125	1.187
ELE-503 Control System-II	CO.1	3	2	3
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	2
	CO.5	3	3	3
	CO-ELE-503	3	2.8	2.8
ELE-503 Control System-II LAB	CO.1	3	2	1
	CO.2	3		2
	CO.3	3	1	
	CO.4	3	2	
	CO.5	3	1	2
	CO-ELE-503P	2.66	1	1
ELE-504 Computer Aided Simulation	CO.1	3	2	2
	CO.2	2	3	3
	CO.3	2	3	2
	CO-ELE-504	2.33	2.66	2.33

EE-509 Digital Electronics and Logic design	CO.1	3	3	2
	CO.2	2	2	2
	CO.3	2	3	3
	CO.4	3	2	3
	CO.5	3	3	3
	CO-ECE-509	2.67	2.5	2.67
ECE-508 Communication Systems	CO.1	3	2	3
	CO.2	3	3	1
	CO.3	3	1	3
	CO.4	3	3	1
	CO.5	3	1	2
	CO-ECE-508	2.83	2	1.67
MTH-503 Mathematics-V	CO.1	3	3	3
	CO.2	1	2	2
	CO.3	3		
	CO.4	2	2	3
	CO.5	3	3	3

	CO-MTH-503	2.4	2	2.2
ELE-601 Power System-II	CO.1	3	2	2
	CO.2	3	2	3
	CO.3	3	2	3
	CO.4	3	2	3
	CO.5	3	2	2
	CO-ELE-601	3	2	2.6
	ELE-601P Power system-II LAB	CO.1	3	2
CO.2		3	2	2
CO.3		3	1	2
CO.4		3	2	2
CO.5		3	1	2
CO-ELE-601P		3	1.6	2
ELE-602 Power Electronics		CO.1	3	3
	CO.2	3	3	1
	CO.3	3	3	3
	CO.4	3	2	3
	CO.5	3	3	3
	CO-ELE-602	3	2.8	2.6
	ELE-602P Power Electronics LAB	CO.1	3	1
CO.2		3	2	2
CO.3		3	2	2
CO.4		3	1	2
CO-ELE-602P		3	1.5	2
ELE-603 Electric Machine Design		CO.1	3	2
	CO.2	3	2	3
	CO.3	3	2	3
	CO-ELE-603	3	2	2.67
	ELE-605 Digital Signal Processing	CO.1	3	3
CO.2		3	3	3
CO.3		3	3	3
CO.4		3	3	3
CO.5		3	3	3
CO-ELE-605		3	3	3
ELE-606 Microprocess or		CO.1	3	3
	CO.2	3	3	3
	CO.3	2	3	2
	CO.4	3	3	3
	CO-ELE-606	2.75	3	2.75
	ELE-606P Microprocessor LAB	CO.1	3	2
CO.2		3	1	2
CO.3		2	2	3
CO.4		1	1	1
CO.5		3	1	
CO-ELE-606		2.28	1.142	1.428
ELE-604 Tour & Training		CO.1	3	3
	CO.2	3	3	3
	CO.3	3	3	3

	CO-ELE-604	3	3	3
ELE-701 Power system protection	CO.1	3	3	2
	CO.2	3	3	3
	CO.3	2	2	2
	CO.4	3	3	1
	CO.5	3	3	1
	CO-ELE-701	2.8	2.8	1.8
ELE-701P Power System Protection LAB	CO.1	3	2	2
	CO.2	3	1	3
	CO.3	2	2	3
	CO-ELE-701P	2.67	1.6	2.67
ELE-702 Advanced Power Electronics	CO.1	3	3	2
	CO.2	3	3	3
	CO.3	3	2	3
	CO.4	3	3	3
	CO.5	3	3	3
	CO-ELE-702	3	2.8	2.8
ELE-703 Power System- III	CO.1	3	3	3
	CO.2	3	3	2
	CO.3	3	2	3
	CO.4	3	3	3
	CO.5	3	2	3
	CO-ELE-703	3	2.6	2.8
ECE-708 Electronic Measurements and instrumentation	CO.1	3	3	3
	CO.2	2	2	
	CO.3	3	2	3
	CO.4	3	3	3
	CO.5	2	1	2
	CO-ECE-708	2.71	2.14	2.424
ECE-708P Electronic Measurements and instrumentation LAB	CO.1	3	2	1
	CO.2	3	2	1
	CO.3	3	2	2
	CO.4	3	1	
	CO.5	3	2	2
	CO-ECE-708P	3	1.67	1.33
ECE-706P Project Preliminary Work/Seminar	CO.1	3	3	3
	CO.2	1	2	3
	CO-ECE-708P	2	2.5	3
ELE-704 Power station practice	CO.1	2	2	2
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	2	3	3
	CO-ELE-704	2.6	2.8	2.8

HSS-701 General Management and Economics	CO.1	2	2	3
	CO.2	2	3	3
	CO-HSS-701	2	2.5	3
ELE-803 High Voltage Engineering	CO.1	2	2	2
	CO.2	3	3	3
	CO.3	3	3	3
	CO.4	3	3	3
	CO.5	2	2	2
	CO-ELE-803	2.6	2.6	2.6
ELE-802 Major Project	CO.1	2	2	3
	CO.2	3	3	2
	CO.3	3	3	3
	CO.4	2	3	-
	CO-ELE-802	2.5	2.75	2
ELE-9/E- MAINTENANCE & DESIGN OF ELECTRICAL SUB STATIONS	CO.1	3	3	2
	CO.2	3	3	2
	CO.3	3	3	2
	CO.4	3	2	2
	CO.5	3	2	2
	CO-ELE-9/E	3	2.6	2
ELE-11/E- UTILIZATION AND TRACTION	CO.1	3	3	3
	CO.2	3	3	3
	CO.3	2	3	2
	CO.4	2	3	2
	CO-ELE-11/E	2.5	3	2.5
EEM-110- Power Systems Restructuring and Deregulation	CO.1	3	3	3
	CO.2	3	3	3
	CO.3	3	3	3
	CO-EEM-110	3	3	3

3.2.1.1 Quality / Relevance of Assessment Process:

Theory:

Minor Exams: Minor Exams serve to encourage students to keep up with subject matter covered in class. The minor exam is of $1\frac{1}{2}$ hour for 30 marks. The questions are framed in such a way that it should satisfy blooms taxonomy, wherein each question is mapped to the respective course outcomes of the course, which is evaluated based on the set attainment levels.

Assignments: Assignments are qualitative performance assessment tools designed to assess students' knowledge of engineering practices, framework and problem-solving. Students are assigned course-related work to be completed outside of contact hours, and their submissions are graded on the basis of work quality and originality. A minimum of 2 assignments are given per course and it comprises of overall 10 marks. The questions in the assignment are mapped to the Course Outcomes of the subject.

End Semester (Major) examination: This end-semester examination is of 2-hours duration and covers the entire syllabus of the course. It should generally satisfy all course outcomes for a particular course. The COs are evaluated based on the set attainment levels.

Laboratory Examination:

Performance: Lab courses provide students with first-hand experience with course concepts and with the opportunity to explore methods used in their discipline. All the students are expected to be regular and learn the practical aspects of the subject and develop the necessary skills to become professionals. In order to facilitate interaction among the students and to develop team spirit, the students are expected to carry out experiments in groups. Performance assessment is based on the ability of the student to actively participate in the successful conduct of prescribed practical work and draw appropriate conclusions. The student submits a record of practical work performed in each class.

Major examination: These end-semester practical examinations are of 2 hours duration and cover the entire syllabus of the course. It should generally satisfy all course outcomes for a particular course. The COs are evaluated based on the set attainment levels.

Seminar:

The seminar is a part of the seventh-semester curriculum. The student makes a seminar presentation on a topic of his/her choice and approved by the assigned seminar guide. Seminar presentation is planned for the duration of 25 minutes including a question answering session of 5 to 10 minutes. The seminar is evaluated based on the presentation by the students before an evaluation committee consisting of three/four faculty members. The committee evaluates seminar based on following parameters.

Relevance: The seminar power point presentation shall be fundamentals oriented and advanced topics in the appropriate branch of engineering with references to latest international journal papers. The significance of the seminar topic and the credibility of references cited are used as parameters to assess the relevance of the seminar.

Presentation: The quality of the presentation and communication skill is assessed by the evaluation committee.

Viva-voce: At the end of the presentation, the assessment panel and the student audience ask questions and seek clarifications on specific issues related to the seminar topic. The effectiveness of the student's response to these queries is assessed.

Report and Documentation: A bona fide report on the seminar is submitted at the end of the semester. This report includes, in addition to the presentation materials, all relevant supplementary materials. All references must be given toward the end of the report. Students' ability to comprehend and write effective reports and design documentation is assessed by evaluating committee.

Project:

The project is intended to be a challenge to intellectual and innovative abilities and to give students the opportunity to synthesize and apply the knowledge and analytical skills learned in the discipline of Electrical Engineering. The project is started in the seventh semester and evaluated in the eighth semester.

Project – Phase I:

Students are expected to finalize project themes/titles with the assistance of an identified faculty member as a project guide during the first half of the seventh semester. During phase I, students are required to submit a project plan which contains relevance of the project proposal, literature survey, objectives, statement of how the objectives are to be tackled, time schedule and cost estimate. The assessment tool used to evaluate phase I of project work is:

Project Review: A Project review is conducted at the start of the 7th semester and a project panel evaluates the work based on various parameters. The significance of the work in societal and environmental context is used to assess the **relevance** of the project. The **knowledge level** and **presentation skill** are evaluated by the panel based on their performance. At the end of the presentation, the assessment panel asks questions and seeks clarifications on specific issues related to the project. The effectiveness of the individual student **response to these queries** is assessed.

Project – Phase II:

Preliminary Project: In Preliminary Project, the design part of the proposed work is evaluated. The students' communication skill and depth of knowledge in designing are assessed based on presentation and response to questions asked by the review panel. In this Pre-Project, the percentage of work completed, the difficulties faced and how they tackled these difficulties are analyzed to evaluate project progress. The individual involvement in project work is assessed based on response to questions asked by the panel.

Demonstration: Final demonstration is conducted at the end of the semester to evaluate the completeness and perfection of work done. At the end of the demonstration, the assessment panel asks questions and seeks clarifications on specific issues related to various stages of the project. Responses from each student to these queries are assessed.

Evaluation by Guide: Performance of individual student is continuously evaluated by the project guide. Members of a project group shall prepare and submit separate reports. The report shall record all aspects of the work and is evaluated by the project guide.

Process for assessing the quality of the Projects:

The project evaluation committee and the project guide together will analyze the nature of the project and make sure that the work is environment-friendly, ensures safety, ethics, and cost-effective. The projects are classified into different areas and their relevance to PO's and PSO's are identified to ensure its quality.

Viva – Voce:

Viva – Voce is conducted at the end of the 8th semester as a part of assessing students' knowledge in engineering courses. An internal and an external examiner is appointed by the University for conducting the Viva-Voce University examination.

RUBRIC for B. Tech Dissertation (Electrical Department)

FACULTY	MARKS OBTAINED	AREA EXAMINED
EXAMINER	20	Examines the scope and objective of the dissertation, student's knowledge and interpretation of literature. Looks for the methodology and results of the dissertation and also how the topic is being presented.
SENIOR FACULTY OF DEPARTMENT	10	Examines the quality of results obtained and the approach used for it. The way of presentation and knowledge of the topic should be appropriate.
H.O.D (HEAD OF DEPARTMENT)	20	Examines the level of understanding and originality in the analysis of project topic. The writing style and layout of the dissertation should be of good quality, with no or extremely few linguistic and typographical errors.
SUPERVISOR	50	Examines whether the project demonstrates a high level of understanding and originality in the analysis (theoretical and/or empirical). The project topic should make a significant contribution to the knowledge base of the discipline and field of study. The topic should be innovative having the future scope and the results should be appropriate and of high quality.

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels: (65)

Attainment Levels:

Assessment Methods	Attainment Levels	
Minor Exam Assessment	Level 1	100% CO attainment: Top absolute grade achievers
	Level 2	80% CO attainment: Second absolute grade achievers
	Level 3	60% CO attainment: Third absolute grade achievers
Major Exam Assessment	Level 1	100% CO attainment: Top absolute grade achievers
	Level 2	80% CO attainment: Second absolute grade achievers
	Level 3	60% CO attainment: Third absolute grade achievers

Table 3.2.2 (a) Attainment Levels of COs

CO Attainment Calculation of a Course:

The Course Outcome (CO) attainment level is discussed in light of the course topics, question papers, and student results. There is a more or less uniform distribution of almost all CO's in all course assessments. The student results, define the index for deciding the CO achievement, as to which bandwidth of grades the majority of the class stands in. The CO attainment levels have been studied for a span of three academic years, viz., 2011-2015(CAYm3), 2012-2016(CAYm2) and 2013-2017(CAYm1) graduate batches.

The mathematical relation that has been used for calculating the attainment level indices, is given as,

$$A. L = \frac{((\text{Number of students} * L1) + (\text{Number of students} * L2) + (\text{Number of students} * L3))}{\text{Total class roll}};$$

where, grading levels have been divided into three levels of L1, L2, and L3.

L1: 100% CO attainment: Top absolute grade achievers;

L2: 80% CO attainment: Second absolute grade achievers;*

L3: 60% CO attainment: Third absolute grade achievers.

Total Attainment =30% Minor Exam attainment + 60% Major Exam attainment + 10% Assignment, Quiz etc.

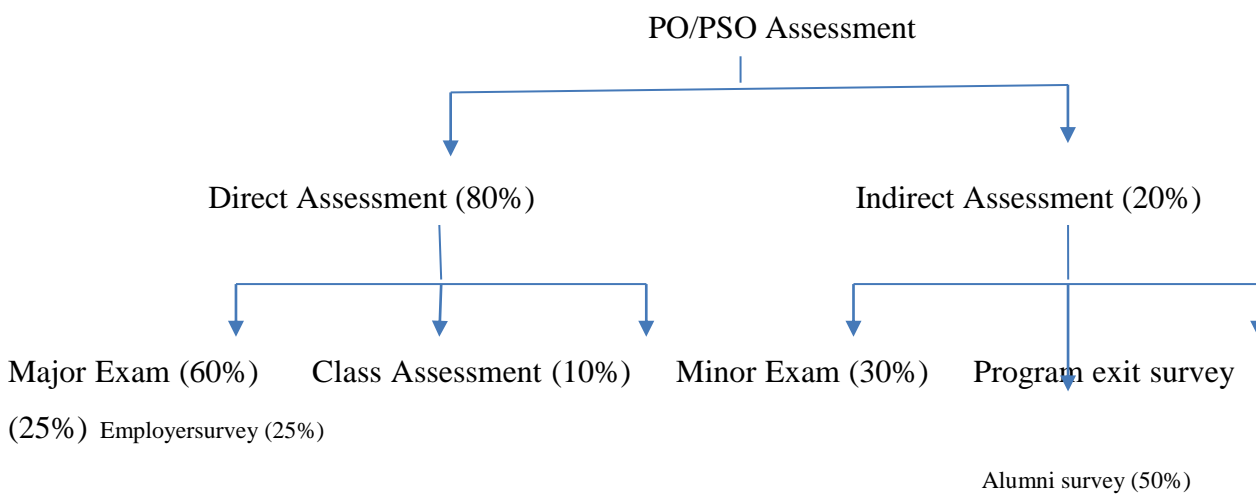
Professional Core Courses	2011-2015 Total Students=71			Yearly CO Attainment Level	2012-2016 Total Students=69			Yearly CO Attainment Level	2013-2017 Total Students=70			Yearly CO Attainment Level
	L1	L2	L3	%	L1	L2	L3	%	L1	L2	L3	%
Basic Electrical Engineering	8	35	27	73.52	7	29	33	71.42	6	26	31	65.79
Network Analysis and Synthesis	4	21	43	65.63	5	28	37	70.85	6	26	36	70.14
Electric Machines-I	8	39	24	75.49	9	31	30	74.00	4	16	44	62.60
Control Systems-I	35	20	16	85.35	40	25	4	89.14	24	19	10	65.50
Power Systems-I	11	41	18	76.90	4	42	29	78.57	9	29	31	73.62
Electrical Measurements and Measuring Instruments	24	40	8	85.63	12	33	23	74.57	30	33	5	86.08
Control System-II	38	17	15	85.35	51	20	4	99.14	22	34	13	82.60
Electric Machines-II	8	42	20	75.49	3	22	41	64.57	4	31	33	70.43
Power Systems-II	13	38	19	77.18	17	42	9	80.00	9	18	32	61.73
Power Electronics	4	23	40	65.35	2	20	44	63.42	3	30	24	60.00
Digital Signal Processing	4	31	36	70.98	32	23	14	84.00	18	39	14	83.47
Microprocessors	46	21	3	90.98	14	36	21	79.14	24	44	2	87.53
Electric Machines Design	12	38	21	77.46	15	31	23	76.57	5	13	43	59.71
Power System Protection	28	38	7	88.16	22	37	14	85.71	28	31	11	86.08
Advanced Power Electronics	17	40	15	81.69	10	38	25	79.14	32	32	6	88.69
Power Systems-III	3	47	20	74.08	1	17	53	66.28	25	30	13	82.31
Power Station Practice	18	42	12	82.81	21	37	18	87.71	47	19	4	93.62
High Voltage Engineering	21	51	3	89.57	17	40	15	82.85	10	34	25	75.65

3.3 Attainment of Program Outcomes and Program Specific Outcomes: (75)

3.3.1 Describe the assessment tools and processes used for assessing the attainment of each of the program Outcomes and Program Specific Outcomes:(10)

3.3.1.1 List of assessment tools and processes

PO and PSO Assessment Process:



PO/PSO assessment is done by giving 80% weightage to direct assessment and 20% weightage to indirect assessment. Direct assessment is based on CO attainment, where 60% weightage is given to attainment through the Major exam and 30% weightage is given to attainment through Minor assessments and 10% weightage is given to attainment through assignment/quiz. Indirect assessment is done through program exit survey, alumni survey and employer survey. Program exit survey and employer survey are given a weightage of 25% each and alumni survey is given a weightage of 50% as has been decided at institute level.

PO and PSO Assessment Tools

The various direct and indirect assessment tools used to evaluate POs & PSOs and the frequency with which the assessment processes are carried out are listed in Table 3.3.1 (a).

Table 3.3.1(a) Assessment tools used for evaluation of PO and PSO attainment

PO and PSO ASSESSMENT TOOLS						
		Course Type		Assessment Methods	Frequency	
		Direct (80% weightage)	CO Assessment	Theory		Minor Exams (two minor exams till 2016 and one minor exams from 2017 onwards per semester)
Assignment	Twice per course					
Major Exam	Once per course					
Laboratory Examination				Daily Performance	Every lab session	
				Major Exam	Once per course	
Seminar				Presentation	Once per course	
Project	Phase I			Project Review		Once per course
				Preliminary Project		Once per course
	Phase II			Demonstration		Once per course
				Evaluation by Guide		Continuous evaluation
Viva-Voce				University assessment	Once in a program	
Indirect (20% weightage)	Surveys	Program Exit Survey			Once a year	
		Employer Survey			Once in two years	
		Alumni Survey			Once a year	

3.3.1.2 Quality/relevance of assessment tools and processes:**(i) Direct Assessment Tools and Process:**

Direct assessment tools described in section 3.2.1 are used for the direct assessment of POs and PSOs. Initially, the attainment of each course outcome is determined using Minor as well as a Major assessment as described in section 3.2.2. The attainment of each PO corresponding to a particular course is determined from the attainment values obtained for each course outcome related to that PO and the CO-PO mapping values. Similarly, the values of PSO attainment are also determined.

(ii) Indirect Assessment Tools and Process:

Indirect assessment is done through program exit survey, alumni survey and employer survey where program exit survey and employer survey are given a weightage of 25% each and alumni survey are given a weightage of 50%.

ii(a) Program Exit Survey:

An exit survey is conducted for students who have graduated out of the department for that year. The questionnaire format in the exit survey form to evaluate the attainment of POs and PSOs is given in section (a) and the relation of POs & PSOs with each question is given in section (b).

(a) Questionnaire Format

Assessment of Abilities, Skills, and Attributes acquired at NIT SRINAGAR

Please rate each of the following items in terms how well your education at NIT SRINAGAR prepared you for them.

Sl. No	Overall, are you satisfied with:	Extremely Satisfied	Satisfied	Somewhat Satisfied
1	Basic knowledge in mathematics, science, Engineering and humanities.			
2	Ability to identify, design, analyze and solve Electrical engineering problems.			
3	Design/development of complex engineering problems and their solutions			
4	Conduct investigations of Complex Problems			
5	Demonstrate the ability to apply advanced technologies to solve contemporary and new Problems.			
6	Awareness to apply engineering solutions in Global, national, and societal contexts.			
7	Understanding professional engineering solutions in societal and environmental contexts			

8	Understanding of professional and ethical responsibilities			
9	Ability to function as an effective member in multi-disciplinary teams			
10	Proficiency in the English language in both communicative and technical forms			
11	Demonstrate the ability to choose and apply appropriate resource management techniques			
12	Capable of self-education and a clear understanding of the value of updating their professional knowledge to engage in life-long Learning.			
13	Program aids in securing jobs in the fields of design, research, manufacturing, safety, quality, sales and service			
14	The program enhances creative and imaginative Skills required in Mechanical Engineering domain.			
15	The program helps to progress through advanced degree or certificate programs			
16	The program helps in innovative and entrepreneurship activities with high professional standards			

(b) Relation of POs and PSOs with questionnaire:

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Questions	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12

PSOs	PSO1	PSO2	PSO3
Questions	Q13 & Q14	Q15	Q16

(c) Evaluation Process:

The questionnaire consists of 16 questions which are relevant for assessing each PO and PSO. The first 12 questions correspond to the 12 POs and the remaining 4 questions are for PSOs (Questions 13 & 14 are used to evaluate PSO 1, Question 15 is used to evaluate PSO 2 and Question 16 is used to evaluate PSO 3). Each question is having 3 options, namely, extremely satisfied, satisfied and somewhat satisfied, which is given marks 3, 2 and 1 respectively. The survey results are tabulated and the average values corresponding to each PO and PSO are calculated.

ii(b)Employer Survey:

Feedback is taken at a frequency of once in two years from the employers who had given jobs to our graduates. The questionnaire format in the employer survey form to evaluate attainment of POs and PSOs is given in section (a) and the relation of POs & PSOs with each question is given in section (b)

(d)Questionnaire Format

Rate the NIT SRINAGAR graduates working in your organization using the following criterion. Put a **tick mark (✓)**

Knowledge, Skills, Abilities, Attitude and other Attributes expected out of NIT SRINAGAR graduates

Sl. No	Overall, are you satisfied with:	Extremely Satisfied	Satisfied	Somewhat Satisfied
1	Capacity for development and analysis of engineering problems and formulation of appropriate solutions, retaining professional and ethical responsibilities.			
2	Aptitude for self-education, ability to learn new skills and a clear appreciation for the value of lifelong learning to update professional Knowledge			

3	Understanding professional engineering solutions for sustainable development and their application in global, national and societal contexts.			
4	Competence for acquiring new skills and applying them in research and development			
5	Fundamental knowledge in mathematics and science and professional fluency in English both communicative and technical forms			
6	Dexterity in the differentiation of management techniques and possession of leadership skills that enable the successful function of multi-disciplinary teams			

(d) Relation of POs and PSOs with questionnaire:

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Questions	Q1& Q5	Q1	Q3	Q4	Q2 & Q4	Q3	Q3	Q1	Q6	Q5	Q6	Q2

PSOs	PSO1	PSO2	PSO3
Questions	Q1, Q2, Q3 and Q4	Q2 and Q4	Q1,Q3,Q5,Q6

(e) Evaluation Process:

The questionnaire consists of 6 questions. These questions are relevant for assessing each PO and PSO. If multiple questions satisfy a PO, then their average is taken. A similar procedure is followed for PSOs also. Each question is having 3 options namely, extremely satisfied, satisfied and somewhat satisfied, which is given marks 3, 2 and 1 respectively. These marks are tabulated and the average values corresponding to each PO and PSO are determined.

ii(c) Alumni Survey:

Feedback is taken from alumni. The questionnaire format in the alumni survey form to evaluate attainment of POs and PSOs is given in section (a) and the relation of POs & PSOs with each question is given in section (b).

(a) Questionnaire Format

Assessment of Knowledge, Skills, Abilities, Attitude, and attributes acquired at NIT

SRINAGAR.

Please rate each of the following Knowledge, skills, abilities, attitudes (K, S, A) or attribute in terms how well NIT SRINAGAR inculcated them in your education.

Sl. No	Overall, are you satisfied with:	Extremely Satisfied	Satisfied	Somewhat Satisfied
1	Basic knowledge in mathematics, science, Engineering and humanities.			
2	Ability to identify, formulate and analyze Engineering problems.			
3	Design/development of complex engineering problems and their solutions			
4	Conduct investigations of Complex Problems			
5	Demonstrate the ability to apply advanced technologies to solve contemporary and new problems.			
6	Understanding professional engineering solutions in societal and environmental contexts			

7	Awareness to apply engineering solutions in global, national, and societal contexts.			
8	Understanding of professional and ethical responsibilities.			
9	Ability to function as an effective member in multi-disciplinary teams			
10	Proficiency in the English language in both communicative and technical forms			
11	Demonstrate the ability to choose and apply appropriate resource management techniques			
12	Capable of self-education and a clear understanding of the value of updating their professional knowledge to engage in life-long learning.			
13	Program aids in securing jobs in the fields of design, research, manufacturing, safety, quality, sales and service			
14	The program enhances creative and imaginative skills required in Electrical Engineering domain.			
15	The program helps to progress through advanced degree or certificate programs			
16	The program helps in innovative and entrepreneurship activities with high professional standards			

(b) Relation of POs and PSOs with questionnaire:

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Questions	Q1	Q2	Q3	Q4	Q5	Q7	Q6	Q8	Q9	Q10	Q11	Q12
PSOs	PSO1					PSO2			PSO3			
Questions	Q13 & Q14					Q15			Q16			

(c) Evaluation Process:

The questionnaire consists of 16 questions which are relevant for assessing each PO and PSO. The first 12 questions are used to evaluate the 12 POs and the remaining 4 questions are for evaluating PSOs (Questions 13 & 14 are used to evaluate PSO 1, Question 15 is used to evaluate PSO 2 and Question 16 is used to evaluate PSO 3). Each question is having 3 options, namely, extremely satisfied, satisfied and somewhat satisfied, which is given marks 3, 2, and 1 respectively. These marks are tabulated and the average is value is shown:

3.3.2. Provide results of evaluation of each PO and PSO: (65)

3.3.2.1 PO Attainment

- The expected level of attainment for each of the program outcomes;
- Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme outcomes is attained; and
- How the results are documented and maintained.

The admission for Electrical Engineering is made through JEE (Main) and the Department attracts higher scorers of JEE (Main). Keeping in view the good quality of admitted students, the target attainment of each PO has been kept at 70%. Achieving the target will help the graduates to meet the Programme Educational Objectives.

The CO attainment levels have been studied for a span of three academic years, viz., 2011-2015, 2012-2016 and 2013-2017 graduate batches.

The percentage of PO attainment from each course is computed using the relation between the weightages linking CO and PO as presented in Table 3.1.4.1 and is given as

PO Attainment (%) = CO Attainment (%) \times W/3 Where W is 3 for strongly related, 2 for moderately related, 1 for low related

Table 3.3.2.1 (a) PO Attainment of all core courses for Batch 2011-15

Course	%CO Attainment	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Basic Electrical Engineering	73.52	73.52	73.52	68.6	63.7	68.6	49	44.1	44.1	49	44.1	34.3	73.52
Network Analysis and Synthesis	65.63	65.64	61.26	65.64	61.26	35.01	43.76	56.88	21.88	61.26	48.13	30.63	61.26
Electric Machines-I	75.49	75.49	65.41	75.48	75.48	70.44	45.28	55.35	35.22	65.41	30.19	30.19	75.49
Control Systems-I	85.35	85.35	85.35	85.35	68.28	73.97	39.83	79.66	39.83	68.28	51.21	45.52	85.35
Power Systems-I	76.90	76.90	76.90	71.76	66.63	71.76	51.26	46.13	46.13	51.26	46.13	35.88	76.90
Electrical Measurements and Measuring Instruments	85.63	85.63	71.35	85.63	71.35	85.63	78.48	64.21	49.95	49.94	64.21	64.21	71.35
Control System-II	85.35	85.35	85.35	79.66	73.97	79.66	56.9	51.21	51.21	56.9	51.21	39.83	85.35
Electric Machines-II	75.49	65.4	50.32	75.49	25.16	25.16	67.17	40.25	50.32	-	40.25	40.25	75.48
Power Systems-II	77.18	77.19	77.19	77.19	61.75	66.89	36.02	72.04	36.02	61.75	46.31	41.17	77.19
Power Electronics	65.35	65.35	60.98	65.35	56.62	65.35	60.98	26.13	21.78	26.13	43.56	60.98	65.34
Digital Signal Processing	70.98	70.98	61.51	42.58	56.78	70.98	42.58	61.51	23.66	47.32	23.66	61.51	56.78
Microprocessors	90.98	90.98	75.8	90.98	75.8	90.98	83.38	68.22	53.06	60.64	68.22	68.22	75.8
Electric Machines Design	77.46	67.13	51.64	77.46	25.82	25.82	68.93	41.31	51.64	-	41.31	41.31	77.46
Power System Protection	88.16	88.17	82.29	88.17	58.78	82.29	47.02	52.90	82.29	35.27	52.90	47.02	58.78
Advanced Power Electronics	81.69	81.69	70.79	49.01	65.35	81.69	49.01	70.79	27.23	54.46	27.23	70.79	65.35
Power Systems-III	74.08	74.08	64.1	44.44	59.25	74.08	44.44	64.19	55.55	49.38	34.56	64.19	59.25
Power Station Practice	82.81	82.81	49.68	82.81	38.64	49.68	77.28	77.28	55.2	55.2	27.6	44.16	77.28
High Voltage Engineering	89.57	89.58	65.69	71.66	59.72	47.78	23.89	11.94	23.89	35.83	11.94	-	71.66
Average	78.98	77.85	68.29	72.07	59.13	64.76	53.62	54.67	42.72	46.03	41.82	54.36	71.65
Direct Attainment	-	77.85	68.29	72.07	59.13	64.76	53.62	54.67	42.72	46.03	41.82	54.36	71.65
Indirect Attainment	-	95	90	90	85	85	85	85	90	90	90	90	95
Direct Attainment(80% weightage)	-	62.28	54.63	57.65	47.30	51.80	42.89	43.73	34.17	36.82	33.45	43.48	57.32
Indirect Attainment(20% weightage)	-	19	18	18	17	17	17	17	18	18	18	18	19
Final Attainment	-	81.28	72.63	75.65	64.3	68.8	59.89	60.73	52.17	54.82	51.45	61.48	76.32

Table 3.3.2.1 (b) PO Attainment of all core courses for Batch 2012-16

Course	%CO Attainment	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
Basic Electrical Engineering	65.79	65.79	65.79	61.40	57.01	61.40	44.08	39.47	39.47	57.01	39.47	30.7	65.79
Network Analysis and Synthesis	70.14	70.14	65.46	70.14	65.46	37.41	46.76	60.79	23.38	65.46	51.44	32.73	65.46
Electric Machines-I	62.60	62.60	54.25	62.60	62.60	58.4	37.56	45.9	29.21	54.25	25.04	25.04	62.60
Control Systems-I	65.50	65.49	65.49	65.49	52.39	56.76	30.56	61.12	30.56	52.39	39.29	34.93	65.49
Power Systems-I	73.62	73.62	73.62	68.71	63.80	68.71	49.3	44.17	44.17	49.32	44.17	39.26	73.62
Electrical Measurements and Measuring Instruments	86.08	86.08	71.73	86.08	71.73	86.08	79.90	64.56	50.21	50.21	64.56	64.56	71.73
Control System-II	82.60	82.60	82.60	77.10	71.58	77.10	60.57	77.09	77.09	55.34	77.09	38.54	82.60
Electric Machines-II	70.43	61.04	47.188	70.43	30.52	30.52	62.68	30.52	47.18	-	46.95	46.95	70.43
Power Systems-II	61.73	61.74	61.74	61.74	49.39	53.51	28.81	57.62	28.81	49.39	37.04	32.93	61.74
Power Electronics	60.00	60.00	55.98	60.00	52.0	60.00	56	24	20	24	40.2	55.98	60.00
Digital Signal Processing	83.47	83.47	72.34	50.082	66.776	83.47	50.082	72.34	27.82	55.92	27.82	72.34	66.776

Microprocessors	87.53	87.53	72.94	87.53	72.94	87.53	80.23	65.64	51.06	58.64	65.64	65.64	72.94
Electric Machines Design	59.71	59.71	39.80	59.71	20.0	19.90	53.14	32.2	40.42	59.71	32.2	39.80	59.71
Power System Protection	86.08	86.07	80.33	86.07	57.38	80.33	45.90	51.64	80.33	34.43	51.64	45.90	57.38
Advanced Power Electronics	88.69	88.69	76.86	82.77	70.95	88.69	70.95	78.86	29.56	59.42	47.30	70.95	70.95
Power Systems-III	82.31	82.31	76.82	49.38	65.64	82.31	49.38	76.82	61.73	55.14	38.41	76.82	65.64
Power Station Practice	93.62	93.62	56.17	93.62	43.69	56.17	87.34	87.34	62.72	62.72	31.20	49.93	87.34
High Voltage Engineering	75.65	75.66	55.48	60.53	50.44	40.35	20.18	10.09	20.18	30.26	10.09	-	60.53
AVERAGE	75.31	74.78	65.25	69.63	56.90	62.70	52.96	54.45	42.43	51.38	42.75	48.41	67.81
Direct Attainment	-	74.78	65.25	69.63	56.90	62.70	52.96	54.45	42.43	51.38	42.75	48.41	67.81
Indirect Attainment	-	95	90	90	85	85	85	85	90	90	90	90	95
Direct Attainment (80% weightage)	-	59.82	52.2	55.70	45.52	50.16	42.36	43.56	33.94	41.10	34.2	38.72	54.24
Indirect Attainment (20% weightage)	-	19	18	18	17	17	17	17	18	18	18	18	19
Final Attainment	-	78.82	70.2	73.7	62.52	67.16	59.36	60.56	51.94	59.1	52.2	56.72	73.24

3.3.2.2 PSO Attainment

- The expected level of attainment for each of the program specific outcomes;
- Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme specific outcomes is attained; and
- How the results are documented and maintained.

The admission for Electrical Engineering is made through JEE (Main) and the Department attracts higher scorers of JEE (Main). Keeping in view the good quality of admitted students, the target attainment of each PSO has been kept at 70%. Achieving the target will help the graduates to meet the Programme Educational Objectives.

The PSO attainment levels have been studied for a span of three academic years, viz., 2011-2015, 2012-2016 and 2013-2017 graduate batches.

The percentage of PSO attainment from each course is computed using the relation between the weightages linking CO and PSO as presented in Table 3.1.4.2 and is given as

$$\text{PSO Attainment (\%)} = \text{CO Attainment (\%)} \times W/3$$

Where W is

3 for Strongly Related

2 for Moderately Related

1 for Related

Table 3.3.2.2 (a) PSO Attainment of all core courses for Batch 2011-15

Course	%CO Attainment	PSO 1	PSO 2	PSO 3
Basic Electrical Engineering	73.52	73.52	58.816	63.71
Network Analysis and Synthesis	65.63	65.63	61.25	43.9
Electric Machines-I	75.49	75.49	75.49	75.49
Control Systems-I	85.35	85.35	73.97	85.35
Power Systems-I	76.90	76.90	76.90	71.77
Electrical Measurements and Measuring Instruments	85.63	85.63	85.63	85.63
Control System-II	85.35	85.35	79.66	79.66
Electric Machines-II	75.49	75.49	75.49	75.49
Power Systems-II	77.18	77.18	66.88	72.034
Power Electronics	65.35	65.35	65.35	65.35

Digital Signal Processing	70.98	70.98	70.98	70.98
Microprocessors	90.98	83.39	90.98	83.39
Electric Machines Design	77.46	77.46	51.89	68.94
Power System Protection	88.16	76.99	80.51	62.44
Advanced Power Electronics	81.69	81.69	76.244	76.24
Power Systems-III	74.08	74.08	64.20	69.14
Power Station Practice	82.81	71.77	77.289	77.289
High Voltage Engineering	89.57	78.37	82.10	78.37
AVERAGE	78.98	76.70	72.97	72.50
Direct Attainment	-	76.70	72.97	72.50
Indirect Attainment	-	100	95	95
Direct Attainment(80% weightage)	-	61.36	58.38	58.0
Indirect Attainment(20% weightage)	-	20	19	19
Final Attainment	-	81.36	77.38	77.0

Table 3.3.2.2 (b) PSO Attainment of all core courses for Batch 2012-16

Course	%CO Attainment	PSO 1	PSO 2	PSO 3
Basic Electrical Engineering	71.42	71.42	57.136	61.89
Network Analysis and Synthesis	70.85	70.85	66.12	66.12
Electric Machines-I	74.00	74.00	74.00	74.00

Control Systems-I	89.14	89.14	77.25	89.14
Power Systems-I	78.57	78.57	78.57	73.33
Electrical Measurements and Measuring Instruments	74.57	74.57	74.57	74.57
Control System-II	99.14	99.14	92.53	92.53
Electric Machines-II	64.57	64.57	64.57	64.57
Power Systems-II	80.00	80	69.33	74.66
Power Electronics	63.42	63.42	63.42	63.42
Digital Signal Processing	84.00	84.00	84.00	84.00
Microprocessors	79.14	72.54	79.14	72.54
Electric Machines Design	76.57	76.57	51.30	68.15
Power System Protection	85.71	74.85	78.28	60.71
Advanced Power Electronics	79.14	79.14	68.58	68.58
Power Systems-III	66.28	66.28	57.44	61.68
Power Station Practice	87.71	76.015	81.86	81.86
High Voltage Engineering	82.85	72.49	75.94	72.49
AVERAGE	78.17	74.64	71.89	72.44
Direct Attainment	-	74.64	71.89	72.44
Indirect Attainment	-	100	95	95
Direct Attainment (80% weightage)	-	59.71	57.51	57.95

Indirect Attainment (20% weightage)	-	20	19	19
Final Attainment	-	79.71	76.51	76.95

Table 3.3.2.2 (c) PSO Attainment of all core courses for Batch 2013-17

Course	%CO Attainment	PSO 1	PSO 2	PSO 3
Basic Electrical Engineering	65.79	65.79	52.632	57.018
Network Analysis and Synthesis	70.14	70.14	65.464	65.464
Electric Machines-I	62.60	62.60	62.60	62.60
Control Systems-I	65.50	65.50	56.76	65.50
Power Systems-I	73.62	73.62	73.62	68.71
Electrical Measurements and Measuring Instruments	86.08	86.08	86.08	86.08
Control System-II	82.60	82.60	77.10	77.10
Electric Machines-II	70.43	70.43	70.43	70.43
Power Systems-II	61.73	61.73	53.49	57.59
Power Electronics	60.00	60.00	60.00	60.00
Digital Signal Processing	83.47	83.47	83.47	83.47
Microprocessors	87.53	80.23	87.53	80.23
Electric Machines Design	59.71	59.71	40.00	53.14
Power System Protection	86.08	75.18	78.619	60.97
Advanced Power Electronics	88.69	88.69	82.74	82.74
Power Systems-III	82.31	82.31	71.33	76.80
Power Station Practice	93.62	81.14	87.34	87.34

High Voltage Engineering	75.65	66.19	69.34	66.19
AVERAGE	75.31	73.07	69.97	66.9
Direct Attainment	-	73.07	69.97	66.9
Indirect Attainment	-	100	95	95
Direct Attainment (80% weightage)	-	58.46	55.98	53.52
Indirect Attainment (20% weightage)	-	20	19	19
Final Attainment	-	78.46	74.98	72.52

CRITERION 4	STUDENTS' PERFORMANCE (100)
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4. STUDENTS' PERFORMANCE (100) (Electrical Engineering)

4.1 Enrolment Ratio (20)

Item	CAY	CAYm1	CAYm2
Sanctioned intake in the program (N)	77	77	77
Total no of admitted students in the first year minus no of students migrated to the other programs/ institutions, plus no of students migrated in the program (N1)	71	57	75
No of students admitted in the 2 nd year in the same batch via lateral entry (N2)	NIL	NIL	NIL
Separate division students, if applicable (N3)	NIL	NIL	NIL
Total no of students admitted in the program (N1+N2+N3)	71	57	75

Table B.4a

CAY – Current Academic Year ; LYG - Last Year Graduate

CAYm1 - Current Academic Year minus1; LYGm1 - Last Year Graduate minus1

CAYm2 - Current Academic Year minus2; LYGm2 - Last Year Graduate minus2

Year of Entry	Total No of students admitted in the program (N1+N2+N3)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
CAY m1 (2016-2017)	57	51			
CAY m2 (2015-2016)	75	48	38		
CAY m3 (2014-2015)	76	65	46	45	
LYG (2013-2014)	73	49	41	35	35
LYG m1 (2012-2013)	76	66	59	46	46
LYG m2 (2011-2012)	74	65	25	15	9

Table B.4b

Year of Entry	Total No of students admitted in the program (N1+N2+N3)	Number of students who have successfully graduated (With the backlog in a Stipulated period of study)
CAY m1 (2016-2017)	57	19
CAY m2 (2015-2016)	75	37
CAY m3 (2014-2015)	76	31
LYG (2013-2014)	73	38
LYG m1 (2012-2013)	76	30
LYG m2 (2011-2012)	74	65

Table B.4c

4.1 Enrolment Ratio = N1/N

Enrolment Ratio = Average of Total students admitted in the 1st year / Sanctioned intake of the program for the previous 3 academic years including Current Academic Year (CAY)

	N (From Table 4.1)	N1(From Table 4.1)	Enrolment Ratio
2017-2018	77	71	92.20
2016-2017	77	57	74.02
2015-2016	77	75	97.40

Table 4.1.1

Average = [(ER1 + ER2 + ER3)/3]: 87.87

Item (Students enrolled at the first year Level on an average basis during the last three years starting from the current academic year)	Marks
>= 80% student enrolled	18

Table 4.1.2

4.2. Success Rate in the stipulated period of the program (20)

4.2.1. Success rate without backlogs in any semester/year of study (15)

$SI = (\text{Number of students who have graduated from the program without backlog}) / (\text{Number of students admitted in the first year of that batch and admitted in the 2nd year via lateral entry and separate division, if applicable})$

Average SI = Mean of Success Index (SI) for past three batches

Success rate without backlogs in any semester = 15 × mean of success index (SI) for past three batches

$SI = (\text{No of students who graduated in the program in a stipulated period of course duration}) / (\text{No of students admitted in the first year of that batch and admitted in the 2nd year via lateral entry})$

Item	Latest Year of Graduation, LYG (CAYm3) 2013-2017	Latest Year of Graduation minus 1, LYGm1, (CAYm4) 2012-2013	Latest Year of Graduation minus 2, LYGm2, (CAYm5) 2011-2012
X Number of students admitted in the corresponding First Year + admitted in the 2 nd year via lateral entry and separate division, if applicable	73	76	74
Y Number of students who have graduated without backlogs in the stipulated period	35	46	09
Success Index (SI=Y/X)	0.47	0.60	0.12

Table 4.2.1.1

Average SI [(SI1 + SI2 + SI3) / 3] : **0.39**

Success rate without backlogs in any year of study = 15 [Average SI] = 15 X 0.39 = 5.85

4.2.2. The success rate in the stipulated period (5)

$SI = (\text{Number of students who graduated from the program in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch and admitted in the 2nd year via lateral entry and separate division, if applicable})$

Average SI = mean of Success Index (SI) for past three batches.

Success rate = 5 * Average SI

Item	Latest Year of Graduation, LYG(CAYm3) 2013-2014	Latest Year of Graduation minus 1, LYGm1,(CAYm4) 2012-2013	Latest Year of Graduation minus 2, LYGm2,(CAYm5) 2011-2012
X Number of students admitted in the corresponding First Year + admitted in the 2 nd year via Lateral entry and separate division, if applicable	73	76	74
Y Number of students who have graduated in the stipulated period	38	30	65
Success Index (SI=Y/X)	0.520	0.394	0.878

Table 4.2.2.1

Average SI [(SI1 + SI2 + SI3) / 3]: 0.597

Success rate = 5 X Average SI = 5 X 0.973 = 2.98

4.3. Academic Performance in Second Year (10)

API = ((Mean of 2nd Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the Third year.

Academic Performance	CAYm1 2016-2017	CAY m2 2015-2016	CAY m2 2014-2015
Mean of CGPA or Mean Percentage of all successful students (X)	7.659	7.63	7.354
Total no. of successful students (Y)	57	75	76
Total no. of students appeared in the examination (Z)	57	75	76
API = x* (Y/Z)	7.659	7.63	7.354

Table B.4.3

Average API [(AP1 + AP2 + AP3)/3]: 7.54

4.4. Placement, Higher Studies and Entrepreneurship (40)

Item	CAY m1 2016-2017	CAY m2 2015-2016	CAY m3 2014-2015
Total No. of Final Year Students (N)	73	76	74
No. of students placed in companies or Government Sector (X)	48	52	59
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (Y)	09	14	11
No. of students turned entrepreneur in engineering/technology (Z)	0	0	0
X+Y+Z	57	66	70
Placement Index : $(X + Y + Z)/N$	0.780	0.868	0.945

Table 4.4.1

Average placement $[(P1 + P2 + P3)/3]$: 0.864

Assessment $[30 \times \text{average placement}]$: 25.93

4.5 Professional Activities (20)

4.5.1 Professional societies/chapters and organizing engineering events (05)

		Marks Obtained	Description
(A)	Availability & activities of professional societies/chapters (3)	0	<ul style="list-style-type: none"> Not available.
(B)	Number, quality of engineering events (organized at Institute) (2)	2	<ul style="list-style-type: none"> Workshop on LATEX Short term course on Modelling & Simulation of Large-Scale Systems.

Table 4.5.1

4.5.2 Publication of technical magazines, newsletters, etc. (05)

		Marks Obtained	Description
(A)	Quality & relevance of the contents and print material (3)	2	<ul style="list-style-type: none"> NIT Srinagar annual institute magazine (2017, 2016, 2015) & Newsletters.
(B)	Participation of students from the program (2)	2	<ul style="list-style-type: none"> Students from the department participated in the events. Idea Challenge 2k17. PLC/SCADA Workshop.

Table 4.5.2

4.5.3 Publication of technical magazines, newsletters, etc. (10)

		Marks Obtained	Description. (No. of events year wise)
(A)	Events within the state (2)	2	2015-16: 06 2016-17: 13 2017-18: 12
(B)	Events outside the state (3)	3	2015-16: 03 2016-17: 08 2017-18: 04
(C)	Prizes/awards received in such events (5)	5	2015-16: 02 2016-17: 09 2017-18: 05

Table 4.5.3

Summary:

Marks obtained: 76.30 out of 100

4.1 18 (out of 20)

4.2.1 5.85 (out of 15)

4.2.2 2.98 (out of 5)

4.3 7.54 (out of 10)

4.4 25.93 (out of 30)

4.5 16 (out of 20)

CRITERION 5	Faculty Information and Contributions	200
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“Faculty information”

For the Year 2015-16

Name of the Faculty Member	Qualification	Association with the Institute			Designation	Date of Joining	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree	University	Year with Graduation						Research Paper Publications	Ph.D. D. Guidance	Faculty Receiving Ph.D.		
Prof. Aijaz Ahmad	Ph.D	IIT Delhi	1998	30 Years	Professor	01/10/1985	Electrical Engineering Department	Power Systems	2	2	-	-	-
Prof. Mairaj -ud-Din Mufti	Ph.D	IIT Delhi	1998	28 Years	Professor	01/09/1986	Electrical Engineering Department	Power Systems	1	3	-	-	-
Prof. Shameem Ahmad Lone	Ph.D	NIT Srinagar	2007	22 Years	Professor	06/ 1990	Electrical Engineering Department	Power Systems	1	2	-	-	-
Dr. Abdul Hamid Bhat	Ph.D	IIT Roorkee	2007	20 Years	Associate Professor	16/01/1996	Electrical Engineering Department	Power Electronics	2	3	-	-	-
Dr. Sheikh Javed Iqbal	Ph.D	NIT Srinagar	2014	20 Years	Associate Professor	14/3/1996	Electrical Engineering Department	Power Systems	1	2	-	-	-
Dr. Mohammad Abid Bazaz	Ph.D	IIT Delhi	2013	16 Years	Assistant Professor	23/03/2000	Electrical Engineering Department	Control Systems	8	3	-	-	-
Mr. Firdous-ul-Nazir	M.Tech	IIT Roorkee	2015	1 Year	Assistant Professor	07/08/2015	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Arish Shaheen	M.Tech	NIT Srinagar	2015	1 Year	Assistant Professor	07/08/2015 to 29/06/2016	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Baziga Yousuf	M.Tech	NIT Srinagar	2015	1 Year	Assistant Professor	07/08/2015	Electrical Engineering Department	Power Systems	-	-	-	-	-

Mr. Anha Farooq	M.Tech	NIT Srinagar	2015	1 Year	Assistant Professor	07/08/2015	Electrical Engineering Department	Power Systems	1	-	-	-	-
Mr. Muzaffar Hussain	M.Tech	Gautham Budha	2014	4 Months	Assistant Professor	07/08/2015 to 31/12/2015	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Ashish Lochan	M.Tech	NIT Kurekshetra	2015	4 Months	Assistant Professor	07/08/2015 to 31/12/2015	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Vinu Shatakshi	M.Tech	NIT Srinagar	2015	3 Months	Assistant Professor	15/09/2015 to 23/12/2015	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Amit Kumar	M.Tech	NIT Srinagar	2015	1 Year	Assistant Professor	18/09/2015	Electrical Engineering Department	Power Systems	2	-	-	-	-
Mr. Himayoon Hassan	M.Tech	AMU	2013	3 Months	Assistant Professor	08/03/2016 to 30/06/2016	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Naveed Bashir	M.Tech	NIT Srinagar	2015	4 Months	Assistant Professor	08/03/2016	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Yasir Shameem	M.Tech	NIT Srinagar	2015	4 Months	Assistant Professor	10/03/2016	Electrical Engineering Department	Power Systems	-	-	-	-	-
Dr. Tanweer Jalal	Ph.D	AMU	1993	18 Years	Associate Professor	03/07/1998	Mathematics	Sequence Spaces	-	-	-	-	-
Dr. Abdul Liman	Ph.D	Kashmir University	2008	20 years	Assistant Professor	17/01/1996	Mathematics	Approximation Theory	-	-	-	-	-
Dr. Neyaz Ahmed Sheikh	Ph.D	AMU	1996	16 Years	Associate Professor	30/03/2000	Mathematics	Wavelet Analysis	-	-	-	-	-
Dr. Zamrooda Jabeen	Ph.D	Kashmir University	2007	20 Years	Associate Professor	06/03/1996	Mathematics	Statistics and Operation Research	-	-	-	-	-
Dr. P. A. Ganai	Ph.D	Kashmir University	2010	16 Years	Assistant Professor	03/2000	Physics Department	Nuclear Physics	-	-	-	-	-
Mr. Mir Mukhtar Ahmad	M. Com., L.L.B	Kashmir University	1981	36 Years	Associate Professor	06/1982	Humanities Department	Marketing & Finance	-	-	-	-	-

For the Year 2016-17

Name of the Faculty Member	Qualification			Association with the Institute	Designation	Date of Joining	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree	University	Year with Graduation						Research Paper Publications	Ph.D. D. Guidance	Faculty Receiving Ph. D.		
Prof. Aijaz Ahmad	Ph.D	IIT Delhi	1998	31 Years	Professor	01/10/1985	Electrical Engineering Department	Power Systems	8	4	-	-	-
Prof. Mairaj - ud-Din Mufti	Ph.D	IIT Delhi	1998	29 Years	Professor	01/09/1986	Electrical Engineering Department	Power Systems	1	3	-	-	-
Prof. Shameem Ahmad Lone	Ph.D	NIT Srinagar	2007	23 Years	Professor	06/1990	Electrical Engineering Department	Power Systems	1	2	-	-	-
Dr. Abdul Hamid Bhat	Ph.D	IIT Roorkee	2007	21 Years	Associate Professor	16/01/1996	Electrical Engineering Department	Power Electronics	21	5	-	-	-
Dr. Sheikh Javed Iqbal	Ph.D	NIT Srinagar	2014	21 Years	Associate Professor	14/3/1996	Electrical Engineering Department	Power Systems	2	3	-	-	-
Dr. Mohammad Abid Bazaz	Ph.D	IIT Delhi	2013	17 Years	Assistant Professor	23/03/2000	Electrical Engineering Department	Control Systems	5	3	-	-	-
Ms. Tabish Nazir Mir	B.Tech	NIT Srinagar	2014	1 Year	Assistant Professor	08/01/2016	Electrical Engineering Department	Power Electronics	1	-	Y	-	-
Mr. Firdous ul Nazir	M.Tech	IIT Roorkee	2015	1 Year	Assistant Professor	07/08/2015 to 21/09/2016	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Baziga Yousuf	M.Tech	NIT Srinagar	2015	1 Year 8 Months	Assistant Professor	07/08/2015 to 05/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Anha Farooq	M.Tech	NIT Srinagar	2015	1 Year 8 Months	Assistant Professor	07/08/2015 to 05/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Naveed Bashir	M.Tech	NIT Srinagar	2015	9 Months	Assistant Professor	08/03/2016 to 31/11/2016	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Yasir Shameem	M.Tech	NIT Srinagar	2015	1 Year	Assistant Professor	10/03/2016 to 05/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-

Mr. Amit Kumar	M.Tech	NIT Srinagar	2015	2 Years	Assistant Professor	18/09/2015	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Shoeb Hussain	Ph.D	NIT Srinagar	2016	4 Months	Assistant Professor	15/12/2016 to 18/03/2017	Electrical Engineering Department	Power Systems	4	-	-	-	-
Mr. Sheikh Suhail	M.Tech	Amity University	2016	5 Months	Assistant Professor	15/12/2016 to 05/04/2016	Electrical Engineering Department	Power Systems	1	-	-	-	-
Mr Masood-ibn-Nazir	M.Tech	VIT	2016	3 Months	Assistant Professor	03/04/2017	Electrical Engineering Department	Control Systems	-	-	-	-	-
Mr. Zahid Farooq	M.Tech	Alfalaha	2016	3 Months	Assistant Professor	03/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Saima Ashraf	M.Tech	MRU	2016	3 Months	Assistant Professor	03/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Bisma Hamid	M.Tech	JNTU	2016	3 Months	Assistant Professor	03/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Imtiyaz Alam	M.Tech	Gautam Buddha University	2016	3 Months	Assistant Professor	21/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Dr. Tanweer Jalal	Ph.D	AMU	1993	19 Years	Associate Professor	03/07/1998	Mathematics	Sequence Spaces	-	-	-	-	-
Dr. Abdul Liman	Ph.D	Kashmir University	2008	21 years	Assistant Professor	17/01/1996	Mathematics	Approximation Theory	-	-	-	-	-
Dr. Neyaz Ahmed Sheikh	Ph.D	AMU	1996	17 Years	Associate Professor	30/03/2000	Mathematics	Wavelet Analysis	-	-	-	-	-
Dr. Zamrooda Jabeen	Ph.D	Kashmir University	2007	21 Years	Associate Professor	06/03/1996	Mathematics	Statistics and Operation Research	-	-	-	-	-
Dr. P. A. Ganai	Ph.D	Kashmir University	2010	17 Years	Assistant Professor	03/2000	Physics Department	Nuclear Physics	-	-	-	-	-
Dr. Fozia Jan Sofi	Ph.D	Jamia Millia Islamia	2014	1 Year	Assistant Professor	09/03/2016	Humanities Department	Management Studies	-	-	-	-	-

For the Year 2017-18

Name of the Faculty Member	Qualification			Association with the Institute	Designation	Date of Joining	Department	Specialization	Academic Research			Sponsored Research (Funded Research)	Consultancy and Product Development
	Degree	University	Year with Graduation						Research Paper Publications	Ph.D. D. Guidance Faculty Receiving Ph.D			
Prof. Aijaz Ahmad	Ph.D	IIT Delhi	1998	32 Years	Professor	01/10/1985	Electrical Engineering Department	Power Systems	6	5	-	-	-
Prof. Mairaj -ud-Din Mufti	Ph.D	IIT Delhi	1998	30 Years	Professor	01/09/1986	Electrical Engineering Department	Power Systems	10	6	-	-	-
Prof. Shameem Ahmad Lone	Ph.D	NIT Srinagar	2007	24 Years	Professor	06/1990	Electrical Engineering Department	Power Systems	7	3	-	-	-
Dr. Abdul Hamid Bhat	Ph.D	IIT Roorkee	2007	22 Years	Associate Professor	16/01/1996	Electrical Engineering Department	Power Electronics	15	7	-	-	-
Dr. Sheikh Javed Iqbal	Ph.D	NIT Srinagar	2014	22 Years	Associate Professor	14/3/1996	Electrical Engineering Department	Power Systems	2	5	-	-	-
Dr. Mohammad Abid Bazaz	Ph.D	IIT Delhi	2013	18 Years	Assistant Professor	23/03/2000	Electrical Engineering Department	Control Systems	4	4	-	-	-
Ms. Tabish Nazir Mir	B.Tech	NIT Srinagar	2014	2 Years	Assistant Professor	08/01/2016	Electrical Engineering Department	Power Electronics	1	-	Y	-	-
Mr. Amit Kumar	M.Tech	NIT Srinagar	2015	2 Years	Assistant Professor	18/09/2015 to 31/08/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr Masood-ibn-Nazir	M.Tech	VIT	2016	6 Months	Assistant Professor	03/04/2017 to 04/09/2017	Electrical Engineering Department	Control Systems	-	-	-	-	-
Mr. Zahid Farooq	M.Tech	AL-Falah University	2016	1 Year 6 Moths	Assistant Professor	03/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Saima Ashraf	M.Tech	MRIU	2016	1 Year 6 Moths	Assistant Professor	03/04/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Bisma Hamid	M.Tech	JNTU	2016	5 Months	Assistant Professor	03/04/2017 to 04/09/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Imtiyaz Alam	M.Tech	Gautam Buddha University	2016	8 Months	Assistant Professor	21/04/2017 to 29/12/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-

Mr. Keshav Dutt	M.Tech	NIT Srinagar	2017	6 Months	Assistant Professor	05/09/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Deep Agarwal	M.Tech	NIT Srinagar	2017	6 Months	Assistant Professor	05/09/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Chandan Kumar	M.Tech	NIT Srinagar	2017	6 Months	Assistant Professor	05/09/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Nasir Rehman	M.Tech	AL-Falah University	2016	6 Months	Assistant Professor	05/09/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Rakesh Kumar Singh	M.Tech	ISM Dhanbad	2014	6 Months	Assistant Professor	05/09/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr Gaurav Bhatt	M.Tech	NIT Shillong	2017	3 Months	Assistant Professor	12/09/2017 to 29/12/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Ms. Kiran Rana	M.Tech	NIT Kurukshetra	2016	3 Months	Assistant Professor	18/09/2017 to 29/12/2017	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Sheikh Safiullah	M.Tech	Sharda University	2017	6 Months	Assistant Professor	06/03/2018	Electrical Engineering Department	Power Systems	-	-	-	-	-
Mr. Aabid Hussain Sheikh	M.Tech	AL-Falah University	2017	6 Months	Assistant Professor	06/03/2018	Electrical Engineering Department	Power Systems	-	-	-	-	-
Dr. Tanweer Jalal	Ph.D	AMU	1993	20 Years	Associate Professor	03/07/1998	Mathematics	Sequence Spaces	-	-	-	-	-
Dr. Abdul Liman	Ph.D	Kashmir University	2008	22 Years	Assistant Professor	17/01/1996	Mathematics	Approximation Theory	-	-	-	-	-
Dr. Neyaz Ahmed Sheikh	Ph.D	AMU	1996	18Years	Associate Professor	30/03/2000	Mathematics	Wavelet Analysis	-	-	-	-	-
Dr. Zamrooda Jabeen	Ph.D	Kashmir University	2007	22 Years	Associate Professor	06/03/1996	Mathematics	Statistics and Operation Research	-	-	-	-	-
Dr. P. A. Ganai	Ph.D	Kashmir University	2010	18 Years	Assistant Professor	03/2000	Physics Department	Nuclear Physics	-	-	-	-	-
Dr Fozia Jan Sofi	Ph.D	Jamia Millia Islamiia	2014	2 Years	Assistant Professor	09/03/2016	Humanities Department	Management Studies	-	-	-	-	-

5.1 Student-Faculty Ratio (SFR) (20)

No. of UG programs in the department (n) = 1

No. of PG programs in the department (m) = 1

u1: No. of students in UG 2nd year

u2: No. of students in UG 3rd year

u3: No. of students in UG 4th year

p1: No. of students in PG 1st year

p2: No. of students in PG 2nd year

No. of students = Sanctioned intake + Actual admitted lateral entry students

UG = u1 + u2 + u3

PG = p1 + p2

S = UG + PG

SFR = S / F

	2017-18	2016-17	2015-16
u1	77	77	77
u2	77	77	77
u3	77	77	77
UG	231	231	231
p1	26	26	26
p2	26	26	26
PG	52	52	52
S	283	283	283
F	19	17	17
SFR	14.89	16.65	16.65
Average SFR	16.06		
Assessment	18		

5.2 Faculty Cadre Proportion (20)

RF: No. of faculty required to comply with 15:1 Student-Faculty Ratio based on the number of students as per 5.1

	No. of Students (S)	No. of Faculty Required (RF)
2017-18	283	18
2016-17	283	18
2015-16	283	18

The reference Faculty Cadre Proportion is RF1: RF2: RF3 = 1:2:6

RF1: No. of Professors required (= RF x 1/9)

RF2: No. of Associate Professors required (=RF x 2/9)

RF3: No. of Assistant Professors required (=RF x 6/9)

	Professors		Associate Professors		Assistant Professors	
	Required (RF1)	Available (AF1)	Required (RF2)	Available (AF2)	Required (RF3)	Available (AF3)
2017-18	2	3	4	4	12	12
2016-17	2	3	4	4	12	10
2015-16	2	3	4	4	12	10
Average	2	3	4	4	12	10.67

Cadre Ratio Marks $\left(\frac{AF1}{RF1} + \frac{AF2}{RF2} \times 0.6 + \frac{AF3}{RF3} \times 0.4 \right) \times 10$	20
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5.3 Faculty Qualification (20)

X: No. of regular faculty with Ph. D.

Y: No. of regular faculty with M. Tech.

RF: Faculty required as calculated in 5.2

	X	Y	RF	Assessment 2 x (10X + 4Y)/RF
2017-18	9	9	18	13.99
2016-17	9	7	18	13.11
2015-16	9	8	18	13.55
Average Assessment				13.55

5.4 Faculty Retention (10)

No. of faculty members in 2017-18 = 19

No. of faculty members in 2016-17 = 17

No. of faculty members in 2015-16 = 17

No. of required faculty (RF) = 18

Percentage of faculty retained during the period of three academic years >90%

Assessment	10
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5.5 Faculty Competencies in Correlation to Program Specific Criteria (10)

The program curriculum is designed to make the students able to analyze and design complex electrical systems and devices. It covers major areas of electric circuit analysis and synthesis, electric machines, power systems, control systems, electrical measurements, and power electronics. The department has the highly competent faculty to cater to the theoretical and practical requirement of all the major and allied areas of the program.

Name of Faculty	Qualification	Area of Specialization/ Research Area
Prof. Aijaz Ahmad	Ph.D.	Power System Operation & Optimization, Flexible AC Transmission Systems, Energy System Planning & Audit
Prof. Mairaj-ud-Din Mufti	Ph.D.	Control Systems, Power System Dynamics and Control, Energy Conversion and Energy Storage Devices
Prof. Shameem Ahmad Lone	Ph.D.	Stand-Alone Power Systems, Application of Energy Storage Devices in power systems, Measurement, and Instrumentation
Dr. Abdul Hamid Bhat	Ph.D.	Power Electronics and Drives, FACTS, Power Quality, Custom Power Devices
Dr. Sheikh Javed Iqbal	Ph.D.	High Voltage, Engineering, Power System Dynamics and Control, Renewable Energy, Distributed Generation
Dr. Mohammad Abid		Control System, Model Order reduction of

Bazaz	Ph.D.	dynamical systems
Ms. Tabish Nazir Mir	B.Tech.	Power Electronics, Induction Machine Drives, Power Quality
Mr. Zahid Farooq	M.Tech.	Power Systems
Ms. Saima Ashraf	M.Tech.	Power Systems
Mr. Keshav Dutt	M.Tech.	Power and Energy Systems
Mr. Deep Agarwal	M.Tech.	Power and Energy Systems
Mr. Chandan Kumar	M.Tech.	Power and Energy Systems
Mr. Nasir Rehman	M.Tech.	Power Systems
Mr. Rakesh Kumar Singh	M.Tech.	Power System Engineering
Mr. Sheikh Safiullah	M.Tech.	Power Systems
Mr. Aabid Hussain Sheikh	M.Tech.	Power Systems

Marks Claimed	10
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5.6 Innovations by the Faculty in Teaching and Learning (10)

Some of the methods adopted by faculty for improvement of student learning are:

- i) Lecture notes and class assignments are uploaded on the Institute website from time to time.
- ii) Software tools like MATLAB/Simulink are used to simulate and analyze systems for a better understanding of the theoretical concepts taught in classrooms.
- iii) Demonstrative simulation models are also uploaded on the Institute website for use and further development by the students.
- iv) Students are encouraged to give presentations on topics pertaining to the state-of-the-art of the courses being taught.
- v) Students are free to discuss problems by interacting with the faculty by email, mobile applications.

Marks Claimed	10
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5.7 Faculty as Participants in Faculty development/ training activities/ STTPs (15)

RF: Faculty required as calculated in 5.2

Name of the Faculty	Marks		
	2017-18	2016-17	2015-16
Prof. Aijaz Ahmad	9	0	0
Prof. Mairaj-ud-Din Mufti	0	0	0
Prof. Shameem Ahmad Lone	3	0	0
Dr. Abdul Hamid Bhat	0	3	0

Dr. Sheikh Javed Iqbal	0	0	0
Dr. Mohammad Abid Bazaz	3	0	0
Ms. Tabish Nazir Mir	0	3	0
Mr. Masood ibn Nazir	0	3	0
Dr. Shoeb Hussain	0	3	0
Mr. Amit Kumar	0	3	0
Mr. Zahid Farooq	3		
Ms. Saima Ashraf	3		
Mr. Keshav Dutt	3		
Mr. Chandan Kumar	3		
Mr. Nasir Rehman	3		
Mr. Rakesh Kumar Singh	3		
Sum	33	15	0
RF	18	18	18
Assessment = (3 x Sum/0.5 RF) (Marks limited to 15)	11	5	0
Average Assessment	5.33		

5.8 Research and Development (75)

5.8.1 Academic Research (20)

Pub: No. of research publications in refereed/SCI Journals, Conferences, Books, Book Chapters, etc.

Ph.D.: No. of Ph. D. Scholars registered/ awarded

Name of the Faculty	2017-18		2016-17		2015-16	
	Pub	PhD	Pub	PhD	Pub	PhD
Prof. Aijaz Ahmad	6	5	8	4	2	2
Prof. Mairaj-ud-Din Mufti	10	5	1	2	1	3
Prof. Shameem Ahmad Lone	7	3	1	2	1	2
Dr. Abdul Hamid Bhat	15	6	21	5	2	3
Dr. Sheikh Javed Iqbal	2	5	2	3	1	2
Dr. Mohammad Abid Bazaz	4	4	5	4	8	3
Ms. Tabish Nazir Mir	1	-	1	-	-	-
Mr. Shoeb Hussain	-	-	4	-	-	-
Ms. Saima Ashraf	-	-	1	-	-	-
Ms. Anha Farooq	-	-	-	-	1	-
Mr. Amit Kumar	-	-	2	-	-	-
Mr. Sheikh Suhail	-	-	3	-	-	-
Mr. Gazala Rashid	-	-	3	-	-	-
Ms. Bisma Hamid	-	-	1	-	-	-
Total	45	28	53	20	16	15

5.8.2 Sponsored Research (20)

Nil

5.8.3 Development Activities (15)

A) Research Laboratories

The following laboratories are extensively used for research activities:

1. Energy Systems laboratory
2. Power Electronics laboratory

3. Virtual Instrumentation Laboratory

B) Working Models/ Charts/ Monograms

Many working models/ laboratory kits have been developed in the departments that serve as instructional aid/ conduct of practical work by the students.

1. Automatic DC motor Stater (Relay based).
2. Model of a 132-kV, 50-MW, 100-km transmission line.
3. Set-up demonstrating time grading of relays.
4. A laboratory model of over-current protection of transformer and transmission lines using microprocessor-based relays.
5. Laboratory set-up for determination of positive, negative and zero sequences. components of the 3-phase transformer.
6. Laboratory set-up of differential protection of single-phase transformer.
7. Laboratory set-up of linear firing scheme.
8. Resistance triggering technique for SCR's
9. Bridge Rectifier
10. 3-phase Voltage Source Inverter
11. Single-phase to 3-phase Matrix Converter PCB Setup.
12. 3-phase to 3-phase Matrix Converter PCB Setup.
13. UJT firing circuit

Marks Claimed	20
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5.8.4 Consultancy (from Industry) (15)

Nil

5.9 Faculty Performance Appraisal and Development System (FPADS) (10)

The institute has in place a continuous, well-thought-of and effective faculty performance appraisal system for the faculty members. For this purpose an 'Annual Assessment Report for the Faculty Staff' is prepared for every faculty member which gives a detailed description of his/ her contribution to the teaching-learning process, contribution in laboratory development, course development, development of teaching aids, laboratory manuals, special lectures, participation in organizing seminars, symposia, conferences, continuing education programs, research and development activities, sponsored research projects, contribution to department and institute administration, etc. A copy of the Assessment form is provided in Annexure X.

The annual assessment report is given a due weightage in the process of promotion/ upgradation of faculty members and hence plays a vital role in the development of the academic, research and administrative system of the institute.

Marks Claimed	10
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5.10 Visiting/ Adjunct/ Emeritus Faculty (10)

A few special lectures were organized by the department during the assessment years which include:

1. 'Solar Photovoltaic System- Role of Power Electronics' on 29th of April, 2017 by Prof. Zainul Salam, Professor, Centre of Electrical Engineering Systems (CEES), Universiti Teknologi Malaysia.
2. 'How to Publish Research Work in High Impact Journals' on 1st of May 2017 by Prof. Zainul Salam, Professor, Centre of Electrical Engineering Systems (CEES), Universiti Teknologi Malaysia.

Criterion 6	Facilities and Technical Support	80
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6.1 Adequate and well-equipped laboratories and technical manpower (40)

S. No	Name of the Laboratory	No. of students per setup (Batch size)	Name of the Major equipment	Weekly utilization status (all the courses for which the lab is utilized)	Technical manpower support		
					Staff	Designation	Qualification
1.	Basic Electrical Engineering Lab	5	i) Ammeters: (0 to 30A), (2.5 to 5A), (1 to 2A), (10 to 20A), (0 to 25 A), (0 to 15 A), (0 to 1A). ii) Wattmeters: (600W,10-20A,125-250V), (1250W,10-20A,125-250V) iii) Capacitive Load-Bank: 10A, 30A iv) Function Generator with digital readout v) Condenser Boxes vi) DC Regulated Power Supply. 30V, 10A vii) Inductive load 15A, 30A viii) Resistive load 15A, 30A Ix) Voltmeter: 0-5V AC/DC, 0-10V AC/DC, 0-20V AC/DC, 0-50V AC/DC, 0-300V, 0-600V x) Digital Tachometer xi) Three Phase Energy Meter xii) 2 channel digital Oscilloscope 8 bit, 100MHz xiii) LRCQ meter	1. B. Tech 3/ELE (Autumn) - 6 hrs. 2. B. Tech 3/ECE (Autumn) – 6 hrs. 3. B. Tech 4/MECH (Spring) – 6 hrs. <u>Total Utilization Per Week:</u> 12 hrs. (Autumn) 6 hrs. (Spring)	Mr. Mohd Ismail Wani	Technician	1. PUC 2. ITI Diploma 3. Short-term Course on PLC Practices & applications. 4. Short term course on Electronic Equipment maintenance

			<p>xiv) Autotransformer: 0-270V.</p> <p>xv) Power factor meter 10/20A, 125-250-500V</p> <p>xvi) Rheostats: 25 Ohm-5A, 480 ohm 15A.</p> <p>xvii) 3 phase load, 30A</p>				
2.	Control Systems Lab	5	<p>i) Linear System Simulator</p> <p>ii) Temperature Controller System</p> <p>iii) Compensation Design.</p> <p>iv) Stepper Motor Study</p> <p>v) Relay Control System</p> <p>vi) DC Position Control System</p> <p>vii) DC Speed Control System</p> <p>viii) PID Controller</p> <p>ix) Linear Variable Differential Transformer</p> <p>x) Digital Control System</p> <p>xi) Digital Ohm Meter</p> <p>xii) Super Capacitor Bank 98 uF.</p> <p>xiii) Type 0 Control System model, Type 1 Control System Model, Test Signal Generator,</p> <p>xiv) Lead-Lag Networks trainer,</p> <p>xv) PI Control System Trainer</p> <p>xvi) Regulated DC Power Supply 0 – 35 V</p> <p>xvii) Power Factor Meter</p> <p>xviii) Resistance Boxes & Rheostats – Multiple</p> <p>xiv) CVT 0 – 300 V AC</p> <p>xv) AC Voltage Stabilizer 5 kVA</p> <p>xvi) Function</p>	<p>1.B. Tech 4/ECE (Spring) – 6 hrs.</p> <p>2.B. Tech 5/ELE (Autumn) – 6 hrs.</p> <p><u>Total utilization per week: 6 hrs.</u></p>	Mr. G. M. Dar	Technical Assistant	Matric

			<p>Generator (Digital)</p> <p>xvii) DC Position Control Mechanism (ARE)</p> <p>xviii) Digital Storage Oscilloscopes TDS 2012</p> <p>xix) Super Capacitor Bank 95 uF</p> <p>xx) PID Control System (Sciencetech)</p> <p>xxi) 4 Channel DS0</p> <p>xxii) ACER PCs</p> <p>xxiii) Dell Optiplex PCs</p>				
3.	Electrical Measurement Lab	5	<p>i) Power Supply (0-30 V, 0-5</p> <p>ii) Power Supply (0-15 V, 0-6A)</p> <p>iii) Oscilloscope Phillips MP 3206</p> <p>iv) Wattmeter (0-8000W, 0-2000W, 0-4500W)</p> <p>v) Anderson's Bridge</p> <p>vi) Maxwell's LC Bridge</p> <p>vii) Haye's Bridge</p> <p>viii) Digital Multi-meter</p> <p>ix) Analog Voltmeters, Galvanometers</p>	<p>1. B. Tech 3/CSE Basic Electrical Lab (Autumn) – 6 hrs.</p> <p>2. B. Tech 3/IT Basic Electrical Lab (Autumn) – 6 hrs.</p> <p>3. B. Tech 4/CHEM Basic Electrical Lab (Spring) – 6 hrs.</p> <p>4. B. Tech 4/ELE Electrical Measurement Lab (Spring) – 6 hrs.</p> <p><u>Total Utilization per week:</u> 12 hrs.</p>	Mr. Mohd Hanief Mir	Lab. Attendant	<p>1. Matric</p> <p>2. Short Term Course on "Repair and maintenance of CRO & Function Generator" at NITTT R Chandi garh.</p>

4.	Power Systems Lab	5	<p>i) Insulators: 33kV, 11kV, 440V, 6.6kV</p> <p>ii) Variacs: 3 phase, 30A, Single Phase, 15A -1No</p> <p>iii) Inductive load 15A -1No</p> <p>iv) Overcurrent protection of transformer and transmission line using microprocessor kit</p> <p>v) Determination of positive, negative and zero sequence components of 3 phase Transformer kit</p> <p>vi) Transformer 1:1 (2KVA Single Phase)</p> <p>vii) Resistance load bank 230/440V 30A</p> <p>viii) Time grading of Relays kit</p> <p>ix) Oil tester kit</p> <p>x) Earth fault relay 220V DC</p> <p>xi) Instantaneous differential relay</p> <p>xii) Under frequency relay</p> <p>xiii) Field failure relay</p> <p>xiv) Overcurrent relay</p> <p>xv) Regulated Dc Power Supply 12A, 35V</p> <p>xvi) 15MHz, 2 channel Oscilloscope</p> <p>xvii) Motor protection demonstration panel</p>	<p>1. B. Tech 5/ELE Power System-1 (Autumn) – 6 hrs.</p> <p>2. B. Tech 6/EE Power System-2 (Spring) - 6 hrs.</p> <p>3. B. Tech 7/ECE Power System (Autumn) – 6 hrs.</p> <p>4. B. Tech 7/ELE Power System Protection (Autumn) – 6 hrs.</p> <p><u>Total Utilization per week:</u> 18 hrs. (Autumn), 6 hrs. (Spring)</p>	Mr. Showkat Ahmad Mistry	Senior Technician	1 Matric 2 Diploma
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5.	Power Electronics Lab	5	i) Linear firing Scheme Lab Kit ii) Power Quality And Energy Analyser FLUKE. iii) dSPACE 1104 iv) Resistance triggering technique for SCR v) Single phase half wave controlled rectifier vi) Three Phase Voltage Source Inverter vii) Single phase bridge rectifier viii) SCR Triggering RC Trainer ix) Full and half controlled converter kits x) 3 Phase Half Wave Rectifier Trainer xi) Single phase to 3 phase matrix converter PCB Setup xii) 3 phase to 3 phase matrix converter PCB Setup xiii) 3 level neutral point clamped converter xiv) 4 leg Voltage Source Inverter xv) VSI based drive xvi) dSpace 1103 xvii) DSpace micro lab box xviii) UJT firing circuit kit xix) Power scope Analog xx) Digital Storage Oscilloscope xxi) DC power supply xxii) Inductor Banks 15A xxiii) Resistor Load Banks xxiv) 3 phase	1. B. Tech 6/ELE Power Electronics (Spring) – 6 hrs. 2. B.Tech 3/METT Basic Electrical (Autumn) – 6 hrs. 3. B.Tech 6/ECE Power Electronics (Spring) – 6 hrs. Total Utilization per week: 12 hrs. (Spring), 6 hrs. (Autumn)	Mr. Farooq Ahmad Mir*	Technical Assistant (SG-II)	Matric ITI Diploma Short Term Course on “Repair and maintenance of CRO & Function Generator” at NITTTR Chandigarh
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			Autotransformer xxv) Single phase Autotransformer xxvi) 3 phase Induction Motor xxvii) Single-phase Induction Motor xxviii) Drilling Machine				
6.	Electrical Machines Lab	5	<p>i) DC Shunt generator 3KW,1500rpm,13.7A,220V</p> <p>ii) Alternator coupled with shunt DC motor <u>Alternator:</u> 5KVA,1500 rpm, 420V, 0.9A <u>Motor:</u> 7.5Hp,31A,1500 rpm, 220V</p> <p>iii) Synchronous Motor Set Motor: 7.5Hp, Synchronous Motor: 10HP</p> <p>iv) DC Series coupled with MG 1500 rpm, 20A, 230V, 5HP</p> <p>v) DC series generator coupled with DC Motor <u>Gen:</u> 3KW, 1500rpm, 220V, 14A. <u>Motor:</u> 5 Hp, 21.5 A, 1500 rpm, 220V.</p> <p>vi)3 phase Induction Motor 6.8A, 5.3hp, 400/440V, 1445 rpm - 1No</p> <p>viii) Scharge Motor 330V, 2100 rpm -1No</p> <p>ix) Single Phase Induction Motor 0.75 KW, Capacitor run, Cap start 230V, 7.2A, 1440rpm -1No</p> <p>x) Slip Ring Induction</p>	<p>1.B. Tech 4/ELE Electrical Machines-1 (Spring) – 6 hrs.</p> <p>2. B. Tech 5/ELE Electrical Machines-2 (Autumn) – 6 hrs.</p> <p>Total utilization per week: 6 hrs.</p>	Mr. Showkat Ahmad Mistry	Senior Technician	Matric Diploma

		<p>Motor 440V, 1500 rpm, 3.7 KW, 7.5</p> <p>xi) 3 phase Induction Motor 5Hp, 1440rpm, 7.3A</p> <p>xii) Capacitor start Induction Motor 0.75 KW, 1425 rpm, 240 V, 7A</p> <p>xiii) DC Shunt generator coupled with Dc Motor <u>Gen:</u> 3KW,13.7A, 220V,1500rpm <u>Motor:</u> 21.5A,220V,5 Hp,1500rpm. -1No</p> <p>xiv) Alternator coupled with series DC Motor: Alternator: 1500 rpm, 50cycle, 400/220, 8.5A0.8pf</p> <p>xv) Dc compound machine 1500 rpm, 5 HP, 21.5 A, 220V - 1No</p> <p>xvi)Single Phase Induction Motor coupled with DC Motor <u>IM:</u> 2.2KW, 220V, 1440 rpm, 18A <u>DC Motor:</u> 3.4 KW,1500rpm, 220V,19.5A -1No</p> <p>xvii) 3 phase Rectifier thyristorized 100A- 1No</p> <p>xviii) 3Phase Autotransformer 32A - 4 No</p> <p>xix) 3 phase Induction Motor fitted with belts 3.7 kW, 5Hp, 415 V, 1440 rpm, 7.6 A- 2No</p> <p>xx) Single phase Autotransformer 10A, 15A</p> <p>xxi) Single Phase Resistive load 30A-</p>				
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			<p>2No xxii) Single Phase Capacitive Load 30A,230V-1No xxiii)Inductive Load 30A,230 xxiv)DC Motor Starter (Relay based) xxv) 2KVA isolation transformer 8.7A,230V</p>				
7.	Microprocessor and DSP Lab	3	<p>i) 8085 Microprocessor trainer kits ii) Power Supply (0-30V, 0-10A) iii) Universal Programmer iv)EPROM Eraser v) DSP Kits vi) PCs</p>	<p>B. Tech 6/ELE Microprocessor (Spring) – 6hrs. Total utilization per week: 6 hrs.</p>	Mr. Mohd Hanief Mir	Lab. Attendant	Matric Short Term Course on “Repair and maintenance of CRO & Function Generator” at NITTTR Chandigarh
8.	Computation Lab	4	<p>i) Dell Optiplex 9020 Pcs – 6 No. ii) Acer Pcs – 10 No. iii) 3 X 12 LAN Switch and Rack for High-Speed Internet Connectivity in the Department iv) 5 kVA Alpha Series UPS System along with 12 V, 65 AH batteries (10 No.) v) MiPower System Analysis and</p>	<p>1. B. Tech 5/ELE Control Aided Simulation (Autumn) – 6 hrs. 2. M. Tech EP&ES Power System Simulation- (Autumn) –</p>	Mr. G. M. Dar	Technical Assistant	Matric

			Simulation Software – 5 Licenses	6 hrs. 3. M. Tech EP&ES Power System Simulation - 2 (Spring) – 6 hrs. Total Utilization per week: 12 hrs. (Spring), 6 hrs. (Autumn)			
9.	High Voltage Engineering Lab	10	i) High voltage Impulse Generator ii) High Voltage AC Testing Transformer iii) High Voltage DC Supply iv) High Voltage Oil Tester v) Kilovolt Meter vi) Resistive Voltage Divider vii) Digital Earth Resistance Tester viii) Mega Ohm Meter	1. B. Tech 8/ELE High Voltage Engineering (Spring) – 6 hrs.	Mr. Ali Mohamm ad Sheikh*	Technici an	Under Matric
1 0	Virtual Instrumentatio n Lab	-	i) Acer PCs ii) Dell Optiplex PCs iii) dSPACE Kit iv) PCI 6024E Data Card with accessories v) PCI 6014E Data Card with accessories vi) Supercapacitor Bank vii) Motor Generator Set viii) Rooftop Solar PV Panels ix) DasyLab Software with Hardware interface	1. B. Tech 5/ELE Control System & VI Lab (Autumn) – 6 hrs. 2. Research Scholars Lab	N.A	N. A.	N. A.

			x) Lab Software with a Hardware interface				
1	Energy Systems Lab – (For Research Scholars)	-	i) Acer PCs ii) Dell OptiPlex PCs iii) HP 1020 Printer	1. Research Scholars Lab	N. A.	N. A.	N. A.

* Staff retiring soon. New recruitment to be made soon

Subcriteria	Evaluation	Marks
6.1 Adequate and well-equipped laboratories and technical manpower.	1. All laboratories are well equipped to run all the programs with sufficient manpower. 2. Old and unserviceable items are discarded periodically (Latest: April 2018) 3. The laboratory staff regularly visit technical institutes for short-term courses and periodic training.	40

6.2 Laboratories: Maintenance and Overall Ambience (10)

Laboratory description in the curriculum	Space, number of students	Number of experiments	Quality of Instruments	Laboratory manuals (Made By Department/Provided by Suppliers)
Basic Electrical Engineering Lab	100 sq. m (38)	10	Very Good	Available
Electrical Machines Lab	175 sq. m (38)	26	Very Good	Available
High Voltage Engineering lab	2165 sq. m (38)	09	Excellent	Available
Microprocessor and DSP Lab.	21 sq. m (38)	09	Excellent	Available
Control Systems Lab	83 sq. m (38)	06	Very Good	Available
Measurement Lab	25 sq. m (38)	07	Good	Available
Power Electronics Lab.	65 sq. m (38)	14	Very Good	Available
Computation Lab	35 sq. m (38)	03	Very Good	Available
Virtual Instrumentation Lab.	22 sq. m (10)	10	Very Good	Available
Power Systems Lab	144 sq. m (38)	15	Good	Available

Subcriteria	Evaluation	Marks
6.2 Maintenance and overall ambience	1. All the labs are well ventilated 2. All labs are well lit 3. 24*7 Single/Three Phase power supply is provided 4. Fans are provided in each lab for cooling during summer months/ Portable gas heaters are used during winter months 5. LAN and Wi-Fi connectivity are provided. 6. Periodic servicing of equipment is done and all equipment is regularly calibrated for accurate measurements	10

	<p>7. Portable whiteboards are installed for imparting instructions to students</p> <p>8. Proper seating arrangements for students wherever necessary is provided.</p> <p>9. All labs are provided with online uninterruptible (UPS) Supply.</p> <p>10. Students perform the assigned lab work in a group of 5 - 6</p> <p>11. Facility to use the projector in some labs is provided.</p>	
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6.3. Safety Measures (10)

- i) All the equipment of the laboratories are properly grounded.
- ii) Do's and Don'ts boards are installed at appropriate places
- iii) All electrical equipment is protected against over-voltages and short-circuit using MCBs
- iv) Fire Extinguishers are installed at appropriate places
- v) Safety instructions are demonstrated before entering the labs
- vi) Fire and earthquake safety drills are conducted regularly for the safety of students and staff.
- vii) Proper shielding is provided in case of High Voltage Equipment.
- viii) First Aid Kits are available in the labs.
- ix) For Computational Labs, facilities like Data security, Antivirus, and Firewall are provided.
- x) Emergency exits, wherever necessary are provided in case of contingencies.
- xi) Fire Sand Buckets are provided in the corridors

Subcriteria	Evaluation	Marks
6.3 Safety measures in laboratories	All labs and their surroundings have sufficient safety measures as mentioned in section 6.3.	10

6.4 Project Laboratories (20)

The departmental laboratories are sufficiently equipped to carry out B. Tech, M. Tech, and Ph.D. research projects. Depending on the area of specialization, student(s) are assigned laboratories where they undertake their respective projects under the guidance of their supervisors/laboratory in-charges.

Laboratory	Laboratory Incharge
Basic Electrical Engineering Lab	Dr. M. A. Bazaz
Electrical Machines Lab	Dr. S. J. Iqbal
High Voltage Engineering lab	Dr. S. J. Iqbal
Microprocessor and DSP Lab.	Dr. M. A. Bazaz
Control Systems Lab	Dr. M. D. Mufti
Measurement Lab	Dr. S. A. Lone
Power Electronics Lab.	Dr. A. H. Bhat
Computation Lab	Dr. M. A. Bazaz
Virtual Instrumentation Lab.	Dr. S. A. Lone
Power Systems Lab	Dr. Aijaz Ahmad

Each laboratory has designated spaces for students where they fabricate, design and tests their prototypes.

Some of the projects created by students in the different labs of the department are:

- a) **Electrical Machines Lab:**
 1. Pole Changing Induction motor (3 phase)
 2. Automatic DC motor Stater (Relay based)
- b) **Power System Lab:**

1. Design of 132 KV, 50MW, 100km line
 2. Time Grading of Relays.
 3. Overcurrent Protection of transformer and transmission lines.
 4. Determination of positive, negative and zero sequence components of 3 phase transformer.
 5. Differential Protection of Single phase transformer
- c) **Power electronics lab:**
1. Linear Firing Scheme
 2. Resistance triggering technique for SCR's
 3. Bridge Rectifier
 4. 3 phase Voltage Source Inverter
 5. Single phase to 3 phase Matrix Converter PCB Setup.
 6. 3 phase to 3 phase Matrix Converter PCB Setup.
 7. UJT firing circuit.

Subcriteria	Evaluation	Marks
<p align="center">6.4 Project Laboratories</p>	<p>All labs have up to date infrastructure, good lighting, ventilation, 1 or 3 Phase 24*7 power supply with UPS backup, LAN/Wi-Fi Connectivity, seating arrangements, Provision to work on projects beyond office hours</p>	<p align="center">10</p>

CRITERION 7	Continuous Improvement	75
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7.1. Actions are taken based on the results of evaluation of each of the Cos, POs & PSOs (30)

It has been observed that POs 1, 3,4 and 12 have been meeting the target levels over the past three years in general, and the CAY in particular, while Pos 2 and 5 have also been maintained close to target levels. Attainment levels in POs 6, 7, 8, 9, 10 and 11 have not been significantly good, owing to less socio-cultural interactions of students in the academic atmosphere. These POs are mostly of social or managerial nature. While students have been fairing well in the technical spheres, lack of exposure to social challenges faced by an engineer is the reason behind this shortfall. To combat these students are regularly made to visit hydroelectric powerhouses in the state where the emphasis is laid on the environmental, social and political impacts of developing power generation facilities, hence addressing POs 6,7 and 8. Extracurricular activities such as debates, technical and cultural events are held for honing the communication skills of students while teaching them to work as a team.

It was seen that CO attainments were poor in Power Electronics. This was attributed to weak fundamentals in mathematical tools such as Fourier series, transform theory etc. To address the issue, more practice sets were given to students per semester, and emphasis was laid on mathematical techniques used in the subject. Similarly, low attainment levels were observed in the course on Electrical Machine Design. This was addressed by facilitating video lectures, animations, and laboratory visits that enabled a better understanding through vivid imagination.

POs & PSOs Attainment Levels and Actions for improvement

Assessment/Analysis of Programme Objectives (Pos)					
POs	Target Level	Attainment Level-2015	Attainment Level-2016	Attainment Level-2017	Observations
PO1: Engineering Knowledge: To Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.					
PO1	70%	77.84%	77.125%	74.78%	Electrical engineering curriculum requires the strong foundation of theoretical and practical knowledge of science and mathematics, which the students study in their first year and are able to apply and correlate well over the next years.
Action 1: Mathematical analysis of engineering problems is encouraged so that students can learn fundamental concepts and be able to apply them in problem-solving					
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.					
PO2	70%	65.80%	64.98%	63.09%	Although students are most capable of understanding and analyzing textbook literature, they are seen to slightly lagging in amalgamating their knowledge with state of the art research.
ACTION 1: Students are encouraged to observe, their homes and surroundings to gain insight into real-life engineering problems and think of possible approaches/solutions to these problems.					
ACTION 2: Industrial visits are expected to help students gain knowledge on complex engineering					

problems					
ACTION 3: Research-oriented final year B.Tech Projects are encouraged to develop and hone their research skills.					
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate considerations for the public health and safety, and the cultural, societal, and environmental considerations.					
PO3	70%	73.06%	72.14%	70.47%	Some of the projects developed by students as minor projects/major projects (final year) are not very industry compatible in times of economy or footprint
ACTION1: Students are motivated to include all standard parameters and constraints according to National and International safety norms and to address environmental concerns while focussing on innovative designs for their projects. PCB based converter designs have been initiated to make the work of students at par with industrial standards.					
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis, and interpretation of data, and synthesis of the information to provide valid conclusions.					
PO4	70%	61.17%	61.34%	71.31%	It is observed that most of the project abstract and literature survey are addressing the research-based approach but does not end with valid conclusions.
ACTION1: Students are encouraged to participate in building small experimental kits which can be used to teach future students and their juniors. This gives them an initial exposure to hardware implementation and experimentation, thereby enabling better productivity during final year project					
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.					
PO5	70%	64.96%	65.17%	62.9%	It is observed that Up-gradations of tools and resources are necessary to meet the industry standards and research.
ACTION1: a Continuous up gradation of lab infrastructure is undertaken so as to meet the rapidly going needs of academia. Some recent purchases include power quality analyzers, DSpace, FPGA boards etc.					
ACTION2: Simulation software such as Matlab/Simulink, MiPower, are been taught to students and simulation of circuits is encouraged in many courses, such as Power Electronics, High Voltage Engineering, Control Systems.					
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.					
PO6	70%	53.08%	56.23%	55.0%	The courses floated in the department are addressing the needs of, health, safety and social concerns regarding engineering practices in real life.
ACTION1: To understand the safety concerns and social aspects, student industry visits are encouraged to expand their practical knowledge with the effect of improved practices in engineering. Besides this, some mandatory humanities courses ensure that students are repeatedly reminded of their social responsibilities as electrical engineers.					
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable					

development.					
PO7	70%	56.53%	55.49%	53.28%	The issues of global and environmental awareness among the student should be improved, and they should be made more aware of their responsibilities towards energy efficiency.
ACTION1: Students are encouraged to indulge in projects, in which global and environmental issues are improved, with respect to consumption of energy and utilization of renewable energy resources. Also, a course of Non-Conventional Energy Sources is floated to present renewable energy as the next main technology for electrical engineers.					
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.					
PO8	70%	43.72%	41.46%	41.80%	The students are doing better in improving the overall expertise in the field of engineering but due to lack of communications and other ethical moral knowledge, some are lagging in real life situations.
ACTION1: Career readiness program, corporate lectures, and motivational talks are arranged to overcome the above observations. Class Assessments are encouraged via Open Book exams to help students become self-reliant					
PO9: Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.					
PO9	70%	53.55%	54.38%	49.98%	The students are not able to work as an individual as well as in a team.
ACTION1: Institute holds cultural programs and alumni meets where students are encouraged to volunteer as organizers. This provides them with a platform to work as individuals as well as in groups, helping students groom their skills like leadership and team spirit. Final Year projects are also aligned in such a way that students learn to work and operate as a team.					
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.					
PO10	70%	44.07%	42.91%	45.41%	The communication, presentation and report writing skills are to be further improved among the students.
ACTION1: Soft skills training is imparted to students to enhance various aspects of communication/technical talks by group discussions, presentations, and new learning outcomes. Regular seminars and presentations are held to help students communicate technical ideas well.					

PO11: Project management and finance: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.					
PO11	70%	49.66%	48.96%	48.35%	Few humanities-based courses of the curriculum are directed towards teaching management principles, project management, and financial implications and in multidisciplinary environments. Students are however seen to neglect such courses in comparison to technical courses.
ACTION1: Awareness is created among the student regarding the management principles and managing projects. Also, with many management based recruiters offering placements in the campus, students are expected to realize the importance of management in engineering.					
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.					
PO12	70%	72.43%	71.82%	72.31%	A pre-final year and final year courses of the programme are demonstrating resources for contemporary issues and lifelong learning.
ACTION1: Through advanced level courses that are expected to hold relevance throughout their careers, students are eased into learning skills that have long-term benefits.					

Assessment/Analysis of Programme Specific Objectives (PSOs)					
PSO1: Students should be competent, creative and imaginative electrical engineers employable in the fields of design, research, manufacturing, safety, quality and technical services.					
PSO1	70%	76.70%	74.64%	73.07%	Although students are made well aware and equipped with a basic understanding of simulation software that is used in various spheres of electrical engineering, they are observed to slightly lag in experimentation, hardware development, and research skills.
ACTION1: Workshops for technical writing and simulation of electrical systems are being organized. More hardware based projects are being undertaken.					
PSO2: Students should be able to progress through an advanced degree, certificate programs or participate in continuing education in electrical engineering, business, and other professionally related fields.					

PSO2	70%	72.97%	71.89%	69.97%	The courses of the program are demonstrating the resourcefulness for contemporary issues. The project titles of the final year students are addressing the real-life problems.
ACTION1: Students are motivated to take up the real-life problems during their project work so that they can design, analyze and find a solution which gives exposure to the latest technologies.					
PSO3: Students should take lead in innovation and entrepreneurship activities with high professional standards and moral ethics and prove themselves beneficial to society at large.					
PSO3	70%	72.50%	72.44%	66.9%	It is required to inculcate ethics, good interpersonal relationships, ability to communicate, leadership and project management skills in students
ACTION1: Motivational lectures are arranged to encourage students regarding these activities.					

7.2. Academic Audit and actions are taken thereof during the period of Assessment (15)

1. Course file evaluation

Course files are prepared by faculty members before the semester starts. Course file contents are as per recommendations mentioned in below table. The academic committee consisting of HOD, course coordinator and few of departmental senior faculty members performs an audit of course files i.e. verify the contents of the course file, lesson plan, assignments, extra material lecture notes, etc. The comments of the committee are given as feedback to the faculty member to include the recommended material. This audit ensures the quality deliverables to the students.

Sl. No.	Contents of Course File
1.	Plan of course delivery
2.	Question papers
3.	Answer scripts
4.	Assignments and Reports of Assignments
5.	Project Reports
6.	List of Laboratory Experiments
7.	Reports of Laboratory Experiments

2. Lectures/ Lab evaluation

The academic committee during their random observation of the lectures/lab check delivery of course material as per the lesson plan, teaching aids used, communication skill and classroom management etc. parameters to ensure the teaching methods of benchmarked standards are being

used throughout the institute. Feedback is communicated to the faculty member. The academic committee for observation consists of HOD, and few senior faculty members.

3. Faculty development program (FDP)

A faculty member has to undergo a faculty development program. The FDP to improve the communication skills and to improve the methods of teaching-learning are carried out at the institute level itself by the learning and development team. The technical component in the teaching is improvised with the help of faculty members attending workshops, expert lectures etc. either organized at our institute or at another institute.

4. Review

Review of the faculty member is taken at the end of the semester again to compare the levels – what was at the beginning and after the various feedbacks and training received.

Action was taken by the faculty members:

1. Faculty members incorporate changes suggested by the academic committee if any gaps are found, to ensure quality deliverables.
2. Faculty members have to match the pace of their deliverables as per the students' requirements as well as they have to schedule the lecture plans in such a way that the syllabus is completed on time. To achieve this they can arrange extra lectures and cope- up the syllabus.
3. Regular analysis of the results of mid-term and major examinations of all subjects is done and concerned faculties are guided to take necessary actions. Remedial classes are scheduled in reference to the academic progress of the student.
4. The academic observation is carried out considering two criteria – feedback from students (requested from the authorities) and randomized observation.

7.3. Improvement in Placement, Higher Studies, and Entrepreneurship (10)

Improvement in Placement: (5)

Item	CAY (2017)	CAYm1 (2016)	CAYm2 (2015)
Total No. of Final Year Students	66	77	71
No. of Students Placed on Campus	22	36	16

Item	CAY (2017)	CAYm1 (2016)	CAYm2 (2015)
Number of Core Companies that visited the campus	1	2	3

PLACEMENT & TRAINING RECORD OF ELECTRICAL ENGINEERING DEPARTMENT

Recruiter	2015	2016	2017
TCS	1	5	0
*L&T	2	2	0
*SAMSUNG HEAVY ENGINEERING	0	1	0
WIPRO	0	10	0
MU-SIGMA	0	1	0
INFOSYS	0	7	2
ETA ASCON	5	7	0
GREY-B	0	1	0
XL-DYNAMICS	0	2	0
*FINISAR MALAYSIA	1	0	0
*M/S ABB	5	0	0
RESONANC	1	0	0
UST GLOBAL	1	0	0
VEDANTA	0	0	2
ALLEN	0	0	1
SAGACIOUS RESEARCH	0	0	2
IOCL	0	0	4
ACCENTURE	0	0	1
*PGCIL	0	0	10
TOTAL	16	36	22

It is observed that placement data is slightly unpromising for batch 2012-2017. This can be attributed to the unfortunate events that unfolded in the campus in spring 2016, followed by political turmoil in the summer of 2017.

Improvement in Higher Studies: (3)

Item	CAY (2017)	CAYm1 (2016)	CAYm2 (2015)
Total No. of Final Year Students	66	77	71
No. of Students who opted for higher studies	2	7	6

For the latest outgoing batch, the number of students opting for higher studies is low as many others are still applying/writing exams for higher studies and the data are not adequate enough.

7.4. Improvement in the quality of students admitted to the program (20)

Student quality is assessed through the opening and closing rank in JEE Mains, of students admitted into the undergraduate program of the electrical engineering department.

Opening and closing rank analysis:-

Item	CAY 2017	CAYm1 2016	CAYm2 2015	
Joint Entrance Examination, main	No. of Students admitted	69	57	75

(JEE main)	Opening Rank	OP-32547 OBC-9920 SC-4561 ST-1514	OP-25023 OBC-10375 SC-105896 ST-147413	OP-25205 OBC-11207 SC-118885 ST-128219
	Closing Rank	OP-80526 OBC-87360 SC-24246 ST-3328	OP-48318 OBC-305136 SC-211351 ST-172461	OP-54699 OBC-416539 SC-247543 ST- 211805

Academic Performance IN 10+2 (PCM percentage):-

Item	CAY 2017	CAYm1 2016	CAYm2 2015
No. of Students admitted	69	57	75
Average PCM Percentage	82.68%	88%	86.11%

**Electrical Engineering Department
National Institute of Technology Srinagar**

Budgetary details of the Electrical Engineering Department for the years 2015-2016,2016-2017 and 2017-2018

S. No.	Ref of Stock Book Item No. Page No.	Particular of each item with accessories	Qty/ No	Purchase order No and Date	Bill No.	Basic Cost (Rs.)	Taxes etc. (Rs)	Total Cost (Rs.)	Issue to Lab
1	S. Book No. 790 P. No. 98 Dt 12/05/15	1-Phase Current range 2.5/5 A Low pf 150/300/600 V Wattmeter	5 No	NIT/CPU 55/ Elect 2013-2014 Dt 29/03/2014		4950*5		24750	Machine Lab
2		1-Phase Current range 5/10 A (High pf) 150/300/600 V Wattmeter	5 No			2800*5		14000	
3		3-Phase 2 element Wattmeter range 5/10 A (High pf) 250/500 V	4 No			5250*4		21000	

							Total=	59750	
							5 % cost VAT	+2987	
								=62737	
							Penalty rejected 50%	- 2625	
							All total	60112	
4	S. Book No. 789 P. No. 97	MiPower- Power Analysis and simulation software Package	1 No	NIT/Electrical 19 2015=2016 Dt 20/05/2015	19	500000	60000 Service tx 12 , 1200 E Cess 02%, 600 S H E Cess 01%, 27,500 Cst 5.5 %	589,300	Power Systems Lab
5	S. Book NO. 786 Pg No. 94	ACE kits 1103 Hardware	1 No	NIT/CPU 55/elect 14-15	9820 Dt 14- 15	14,00,000	77000 Cst 5.50 %	14,77,000	Power Electronics Lab

6	S. Book NO. 795 Pg No. 103 12/05/1 6	3-level inverter Stack	2 No	NIT/CPU/ 04/elect 16-17			1,27,5 00		2,55,0 00	Power Electro nics Lab
7		IGBT Based 3 phase bridge converter	2 No				52500		1,05,0 00	
8		#-phase IGBT rectifier based inverter	1 No.				78000		78,000	
9		3-phase IGBT Stack with Chopper	1 No				85000		85,000	
								Total	5,23,0 00	
								VAT 14%	+73,22 0	
								P & F	+17,88 6	
								TOT AL	=6,14, 106	
10	S. Book NO. 798 Pg No. 107	DSP DS1104 of DSpace	2 No	NIT/CPU 07/elect/2016-17 Dt 12/05/15			5,35,0 00		10,70, 000	Power electron ics Lab

1		ACE_MLBX_1302T	1 No			18,75,000		18,75,000	
			3 No					29,45,000	
							Cst 5.5%	1,61,975	
							Total	31,06,975	
1	S. Book NO. 800 Pg No. 109	D-Link wireless N POE access point (DAP-2230)	2 No		121411 DT 18/04/17	6,700		13,400	Computer Lab
		8-Port D-Link Switch	1 No			650		650	Research Scholar
								14.050	
							VAT 5%	702.50	
							Total	14752.50	
1	S. Book NO. 801 Pg No. 110 Dt 07/06/17	HP Laser Let Printer	1 No		387 07/06/17	7816.59	VAT 1133.41 Tax rate 14 %	8,950	Ms. Tabish
1	S. Book NO. 802 Pg No. 111 Dt 31/05/16	435-11 Power Quality and Energy Analyser Fluke	1 No		1617-03880 31/05/16	4,76,000	VAT 5% 23,800	4,99,800	Power Electronics Lab
1	S. Book NO. 803 Pg No. 112 Dt 16/02/17	Annual Software Support Contract	1 No	PRDC/2016-2017-NIT HATBL/384-1 DT 15/02/17	24053	56,522	Service Tax 14 % SBC 5% KKC 5%	56,522 +7912 + 283 + 283 =65,000	Power System Lab
1	S. Book NO. 809 Pg No. 113 Dt 22/05/18	Motorized Screen	1 No		GST-032 22/05/18	13,288.14	9% GST 1105.93 SGS T 9% 1105,93	14,500	Committee Room In charge Dr. Abid Bajaz
1		Ceiling Mount Stand	1 No			3813.53	9% GST 343.2	4500	

							2 SGS T 9% 343.2 2		
1 8		VGA HDMI Converter	1 No			1423.7 3	9% GST 128.1 4 SGS T 9% 128.1 4	1680	
1 9		HDMI cable	1 No 10 met ers			1694.9 2	9% GST 152.5 4 SGS T 9% 152.5 4	2000	
2 0		Laser Printer	1 No			1864.4 1	9% GST 167.8 0 SGS T 9% 167.8 0	2200	
							Total	24,880	
2 1	S. Book NO. 804 Pg No. 114 Dt 12/08/1 5	FPGA Boards and Relevant operating software	3 No	NIT/CPU/06/ELE CT 16-17 DT 12/08/15	LSC- 02208/16	16,254		48,762	Power Electro nics Lab
							VAT 13.50 % 6582. 87		
								55344. 87	
2 2	S. Book NO. 805 Pg No. 115 Dt 25/06/1 7	Solar PV Training Research System	1 No	NIT/CPU/03/ELE CT/16-17	69 Dt 25/06/17	1,90,0 00	VAT 5% 9,500	1,99,5 00	Machin e Lab
2 3		Solar PV Grid- Tied Training System	1 No			3,10,0 00	VAT 5% 15,50 0	3,25,5 00	
							Total =	5.25,0 00	

24	S. Book N0. 807 Pg No. 117 Dt 16/05/17	3338051653 WC-53 35 Digital multi-functional Machine with printer Scanner (Size A3 min)	1 No	NIT/CPU/17/elect /3064-67 Dt 20/12/17		14,900	CGS T 20,860 SGS T 20,860	1,90,720	Electric office
25	S. Book N0. 806 Pg No. 116 Dt 27/08/17	HP Printer 132 NW	1 No			13,367.19	CGS T 1871.41 SGS T 1871.41	17,110	Virtual Lab R/S
26	S. Book N0. 808 Pg No. 118 Dt 15/03/2018	Kingston 8 gb RAM DBR-3 (1600) MHz	15 No		AIS/0019 4/17-18 Dt 15/03/18	5,330		79,950	R/S
27	S. Book N0. 810 Pg No. 121 Dt 11/06/2018	Kingston 16 gb RAM DBR-3 (1600) MHz	1 No			6,864.41	GST 18% 1235.42	8,100	R/S Mr. Viqar
28		Kingston 8 gb RAM DBR-3 (1600) MHz	1 No			4,449.15	GST 18% 800.847	5250	
							total	13,350	

CRITERION 8	FIRST YEAR ACADEMICS	50 marks
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8. FIRST YEAR ACADEMICS

8.1. FIRST YEAR STUDENT-FACULTY RATIO (FYSFR) (5)

Assessment = $(5 \times 15) / \text{Average FYSFR}$ (Limited to Max. of 5)

Data for first-year courses to calculate the FYSFR:

Year	Number of students (approved intake strength)	Number of faculty members (considering fractional load)	FYSFR
CAY	727	47	15.47
CAY _{m1}	685	43	15.93
CAY _{m2}	685	41	16.70
Average	16.03		
Assessment = $(5 \times 15) / \text{Average}$	4.67		

Table B 8.1

8.2. Qualification of Faculty Teaching First-Year Common Courses (5)

Assessment of qualification = $(5x + 3y) / RF$

x = Number of Regular Faculty with Ph. D

y = Number of Regular Faculty with a Post-graduate qualification

RF = Number of faculty members required as per SFR of 15:1

Year	x	Y	RF	Assessment of faculty qualification $(5x + 3y) / RF$
CA	20	48	48.46	5
CAY _{m1}	20	43	45.66	5
CAY _{m2}	20	42	45.66	5

Average Assessment	5
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Table B.8.2

8.3 First year academic performance (10)

Academic Performance=(Mean of 1st Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the Percentage of marks in First Year of all successful students / 10)) x (number of successful students/number of students appeared in the examination)

Successful students are those who are permitted to proceed to the second year.

Academic Performance	2017-18	2016-2017	2015-2016
Mean of the percentage of Marks of all successful students(X)	76.16	72.37	70.74
Total Number of successful students(Y)	492	345	571
Total Number of students appeared in the examination(Z)	508	385	573
Academic Performance	7.38	6.49	7.05

Assessment = Average API: 6.97

8.4 Attainment of Course Outcomes of first-year courses (10)

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes for the first year is done (5)

Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets etc.)

(i) CO Assessment Rubrics:

Course Outcome is evaluated based on the performance of students in the mid-term exam, major examination and continuous assessment (in the form of assignments, quizzes, case-study, and presentation). The contributions are 30%, 60% and 10% for mid-term exam, major examination, and continuous assessment.

- | | |
|-------------------------------|------------------------|
| 1. Mid-Term Assessment | (30% weightage) |
| 2. Major Assessment | (60% weightage) |

3. Continuous Assessment

(10% weightage)

(ii) CO Assessment Tools:

The various assessment tools used to evaluate COs are listed in the table given below.

Course	Assessment Tools	Frequency
Theory	Mid-term	Once/Course
	Continuous Assessment	Daily
	Major	Once/Course
Lab	Continuous Assessment (Report, Experiments)	Daily
	Major Lab Exam (Viva-voice, Perform a Given Experiment)	Once/Lab Course

(iii) Quality/Relevance of Assessment Process:

Theory:

Mid-term Test: It serves to encourage students to keep up with subject matter covered in class. This is of 90-minute duration and is evaluated for 30 marks. Minimum one test is conducted for each course. The questions are framed in such a way that it should satisfy blooms taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department.

Major Exam: It is of 2 hours duration and is evaluated for 60 marks. The question paper is framed in such a way that it satisfies blooms taxonomy, wherein each question is mapped to the appropriate course outcomes of the respective course, which is evaluated based on the set attainment levels by the department. The question paper will be verified by the Head of the Department and may be accepted with or without modifications.

Continuous Assessment: It includes assignments, quiz, presentations, etc. These are qualitative performance assessment tools designed to assess students' knowledge of engineering practices, framework and problem-solving.

Students are assigned course-related work to be completed outside of contact hours, and their submissions are graded on the basis of work quality and originality. A minimum of 2 assignments are given per course and each assignment is evaluated for 10 marks. The questions in the assignment should be mapped to the Course Outcomes of the subject. The questions given are categorized to knowledge, comprehension, application, analysis, evaluation and synthesis level.

Practical:

Performance: Lab courses provide students first-hand experience with course concepts and the opportunity to explore the methods used in their discipline. All the students are expected

to be regular and learn the practical aspects of the subject and develop the necessary skills to become professionals. In order to facilitate interaction among the students and to develop team spirit, the students are expected to carry out experiments in groups. Performance assessment is based on the ability of the student to actively participate in the successful conduct of prescribed practical work and draw appropriate conclusions. The student submits a record of practical work performed each week.

Mid-term lab exam: A mid-term lab exam of 3 hours duration is conducted to assess the ability of a student to perform a given task by integrating the knowledge gained from related theory course and regular lab sessions.

Major examination: This end-semester practical examination is of 3-hour duration and covers the entire syllabus of the course. It should generally satisfy all course outcomes for a particular course. The COs are evaluated based on the set attainment levels.

8.4.2 Record the attainment of Course Outcomes of all first-year courses (5)

The program shall have set attainment levels for all first-year courses.

(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as a target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the COs of a subject plus the performance in the University examination)

CO attainment of all courses

Course	CAY 2013-17	CAYm1 2012-16	CAYm2 2011-15
MTH 101	2.59	2.1	2.4
MTH 201	2.43	2.13	2.16
CIV 102	2.4	2.7	2.4
HU 101	2.52	2.76	2.28
HU 201	2.64	2.52	2.40
MEC 201	2.4	2.37	2.37
PHY 101	2.5	2.53	2.56
PHY 102 P	2.78	2.82	2.56
PHY 201	2.51	2.47	2.52
PHY 202 P	2.72	2.75	2.85
IT 101	2.5	2.5	3
IT 102 P	2.4	1.9	2.4
CSE 201	2.4	2.4	2.4
CSE 202 P	3	3	2.4
CHEM 101	2.4	2.4	2.4
CHEM 102 P	2.2	2.2	2.2
CHEM 201	2.4	2.4	2.4
CHEM 202 P	2.4	2.4	2.4

Table B.8.4.2

8.5 Attainment of Program Outcomes from first year courses (20)

8.5.1 Indicate results of evaluation of each relevant PO and/ or PSO, if applicable (15)

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes are attained through first year course and document the attainment levels. Also include information on assessment processes used together the data upon which the evaluation of each Program Outcome is based indicating the frequency with which these processes are carried out)

(I) PO Assessment

PO assessment is done by giving 80% weightage to direct assessment and 20% weightage to indirect assessment. Direct assessment is based on CO attainment where 80% weightage is given to attainment through end exam and 20% weightage is given to attainment through internal assessments. Indirect assessment is done through program exit survey, alumni survey and employer survey where program exit survey and employer survey are given a weightage of 25% each and alumni survey is given a weightage of 50%.

(II) PO Assessment Tools

The various direct and indirect assessment tools used to evaluate POs and the frequency with which the assessment processes are carried out are listed in table below:

Assessment tools used for evaluation of PO and PSO attainment

PO ASSESSMENT TOOLS AND PROCESSES				
		Course Type	Assessment Methods	Frequency
Direct (80% weightage)	CO Assessment	Theory	Internal Test	Three per course
			Assignments	Twice per course
			End Exam	Once per course
		Practical	Performance	Every lab session
			Model Lab exam	Once per course
			University Exam	Once per course
		Seminar	Presentation	Once per course
		phase I	Zeroth Review	Once per course
				Continuous evaluation
		Phase II	First Review	Once per course
			Second Review	Once per course
			Final Review	Once per course
				Continuous evaluation

		Viva-Voce	Institute assessment	Once in a program
Indirect (20% weightage)	Surveys	Program Exit Survey		Once in a year
		Employer Survey		Once in 2 years
		Alumni Survey		Once in a year

Table B.8.5.1a

(I) Direct Assessment Tools and Process

Direct assessment tools described in above section are used for the direct assessment of POs. Initially, the attainment of each course out come is determined using internal as well as external assessment. The attainment of each PO corresponding to a particular course is determined from the attainment values obtained for each course outcome related to that PO and the CO-PO mapping values.

PO Attainment: CAY-2013-17

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MTH10	2.9	2.2	2.6	2.5	2.5							
MTH20	3	2.	2.5	2	2.5							
CIV 102	3	3				2	1			2	3	3
HU 101				1.2		1				1.8	1	
HU 201						1.52				1.08		1.20
MEC	2.8	0.7	0.8	0.8	0.8	0.7	0.8	1.8	0.8	0.7	0.8	2.
PHY	2.5	1.96		0.								
PHY	2.92	2.85						2.85				
PHY	2.52	1.91		0.6								
PHY	2.8	2.85						2.85				
IT 101	1.5		1.99	0.	1.6	0.9			0.45			
IT 102 P	1.06	0.5	2.5	1.	1.6	1.46						
CSE 201	2.4	2.4	2.4	2.	2.3	0.8	0.8		0.8	0.8	1.85	2.4
CSE 202	3	3	3	3	2	1	1		1	1	1	1
CHM		1.2	0.		0.4	0.4						
CHM		0.76	0.		0.2	0.24						
CHM			0.				0.8					1.26
CHM	1.31	1.31	0.			1.31	1.3					
Average	1.77	1.51	0.99	0.84	0.8	0.63	0.32	0.42	0.24	0.41	0.49	0.60

Table B.8.5.1b

CAYm1-2012-16

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MTH	2.7	2.75	2.68	2.70	2.26							
MTH	2.6	2.2	2.2	1	2.13							
CIV 102	3	2	3			3	2		2	2	3	3
HU 101				0.96		1.4				1.72	1	

HU 201						1.4		1.08	0.96	0.96	0.96	1.12
MEC 201	2.8	0.7		0.6	0.8	0.7	0.	1.8	0.8	0.7	0.	2.8
PHY 101	2.5	1.93		0.6					1	-	-	2
PHY 102	2.6	2.82						2.	1	1	1	1
PHY 201	2.4	1.9		0.6					-	-	1	2
PHY 202	3	2.7	-	-	-			2.				
IT 101	1		1.3	0.9	1.	0.45			0.45			
IT 102 P	0.73	0.3	2.5	1.1	1.69					1.69		
CSE 201	2.4	2.4	2.4	2.4	2.3	0.8	0.		0.8	0.8	1.85	2.4
CSE 202	3	3	3	3	2	1	1		1	1	1	1
CHM 201		1.2	0.4		0.4	0.4						
CHM 201		0.76	0.2		0.24	0.24						
CHM 202			0.3				0.					1.2
CHM 202	1.31	1.31	0.9			1.31	1.					
Average	1.68	1.45	1.07	0.74	0.75	0.59	0.37	0.47	0.45	0.55	0.59	0.92

Table B.8.5.1c

CAYm2-2011-15

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MTH101	2.6		2.75	2.29	2.3							
MTH	2.7	2.7	2.2	1.8	2.4							
CIV 102	2	2				3	1	1			3	3
HU 101				0.96		1.17				1.48	0.92	
HU 201						0.9			0.9	0.96	0.96	1.12
MEC 201	2.8	0.7	0.8	0.8	0.8	0.7	0.8	1.8	0.8	0.7	0.8	2.8
PHY 101	2.4	1.37		0.6								
PHY 102	2.7	2.78						2.75				
PHY 201	2.5	1.5		0.6								
PHY 202	2.8	2.7		-				2.75				
IT 101	1		1.5	0.9	0.7	0.75			0.45			
IT 102 P	1.2	0.6	3	1.2	1.8	0.6						
CSE 201	2.4	2.4	2.4	2.4	2.3	0.8	0.8		0.8	0.8	1.85	2.4
CSE 202	3	3	3	3	2	1	1		1	1	1	1
CHM 201		0.95	0.4		0.4	0.40						
CHM 201		0.75	0.2		0.2	0.24						
CHM 202			0.3				0.8					1.26
CHM 202	1.31	1.31	0.9			1.31	1.3					
Average	1.65	1.39	0.9	0.81	0.72	0.61	0.32	0.46	0.22	0.27	0.47	0.64

Table B.8.5.1d

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

(The attainment levels by direct (student performance) are to be presented through Program level Course- PO matrix as indicated)

POs Attainment Levels and Actions for Improvement (CAY2013-2017)

PO	Target Level	Attainment Level	Observations
PO1	Engineering Knowledge		
PO1	1.76	1.77	TARGETLEVELATTAINED. Since students have basic background in subjects like Mathematics and Engineering Sciences the performance in the mid-term exam as well as end-exam was pretty good. However IT 101, IT 102 and CHM 202 P have not attained the target level.
<p>Action Taken</p> <ol style="list-style-type: none"> 1. ICT enabled teaching. 2. Conducted problem oriented tutorial classes. 3. Remedial classes for weaker students. 			
PO2	Problem Analysis		
PO2	1.54	1.51	TARGETLEVEL NOT ATTAINED. Since syllabus is focused on analytical concepts, analysis of various engineering problems was practiced more during the class sessions. So the students were able to perform good in the mid-term and end examination. However MEC 201, IT 102 P, CHM 201 T, CHM 202 P and CHM 201 P have not attained the target level
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Problem analysis oriented teaching 2. Conducted Tutorial sessions to solve engineering problems 3. Weaker student coaching 			
PO3	Design/development of Solutions		

PO3	0.95	0.99	<p>TARGETLEVELATTAINED.</p> <p>Special attention were given to difficult subjects which exposed the students to develop solutions for various engineering problems.</p> <p>However MEC 201, CHM 201 T, CHM 201 P, CHM 202 P and CHM 202 T have not attained the target level</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Practiced designing solutions of the engineering problems in the class room hours 2. Exposure to professional approach in solving complex problems 3. ICT enabled teaching 			
PO4	Conduct Investigations of Complex Problems		
PO4	1.27	0.84	<p>TARGETLEVEL NOTATTAINED</p> <p>Class hours enriched with problems and case studies helped the students to get gather information about concepts and to solve the problems by investigating it.</p> <p>The syllabus is concentrated more on problem analysis, the classroom sessions helped the students in conducting investigations of complex engineering problems. However, MEC 201, PHY 101 and PHY 201 have not attained the target level.</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. ICT enabled teaching 2. Expert lectures 3. Conducted Technical events as part of Technical Fest & other professional body activities 			
PO5	Modern Tool Usage		
PO5	1.10	0.80	<p>TARGETLEVELATTAINED</p> <p>Exposure to various training sessions boosted the usage of modern tools in the engineering streams</p> <p>However CHM 201 T and CHM 201 P have not attained the target level</p>

<p>Action Taken</p> <ol style="list-style-type: none"> 1. Professional Training sessions 2. Demonstration of latest software tools like CAD and scripting languages 3. Conducted Technical events as part of Technical Fest & other professional body activities 			
PO6	The Engineer and Society		
PO6	0.86	0.63	<p>TARGETLEVEL NOTATTAINED</p> <p>Commitment of an Engineer to the society was trained as part of curriculum. Various NSS activities were arranged to boost the duties and responsibilities of budding Engineers</p> <p>Seminar on Professional ethics conducted for the students trained them about the duties and responsibilities.</p> <p>However CHM 201 T and CHM 201 P have not attained the target level</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Conducted Social Service activities as part of NSS 2. Expert sessions on Professional Ethics 3. Expert sessions on duties and responsibilities of Engineers in the society 			
PO7	Environment and Sustainability		
			<p>TARGETLEVEL NOTATTAINED</p> <p>The sustainable engineering practices were included in the curriculum which enabled the students to learn more about the Environment and sustainability.</p>
PO8	Ethics		
PO8	0.28	0.42	<p>TARGETLEVELATTAINED</p> <p>Students were given training on ethics</p> <p>Instructions were given to the student regarding the professional ethics to be followed in the laboratory sessions</p>

PO9	Individual and Team Work		
PO9	0.36	0.38	TARGETLEVELATTAINED Lab sessions were conducted as individual / team work The social service activities are completed in teams
PO10	Communication		
PO10	0.66	0.67	TARGETLEVELATTAINED Students were given training on communication skills
PO11	Project Management and Finance		
PO11	0.57	0.59	TARGETLEVELATTAINED Understanding and demonstrating management principles and applying to own works enable students to get exposed to Project management
PO12	Lifelong Learning		
PO12	0.57	0.60	TARGETLEVELATTAINED Made the students aware about the need, to prepare and to engage in independent and life long learning in various engineering streams

Table B.8.5.2a

POs Attainment Levels and Actions for Improvement (CAYm1 2012-2016)

PO	Target Level	Attainment Level	Observations
PO1	Engineering Knowledge		
PO1	1.76	1.68	<p>TARGETLEVEL NOTATTAINED.</p> <p>Since students have basic background in subjects like Mathematics and Engineering Sciences the performance in the mid-term and end examination was pretty good.</p> <p>However CHM 202 P,IT 102 PandIT101 have not attained the target level</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. ICT enabled teaching. 2. Conducted problem oriented tutorial classes 3. Remedialclasses for weaker students 			
PO2	Problem Analysis		
PO2	1.54	1.45	<p>TARGETLEVEL NOTATTAINED.</p> <p>Since syllabus is focused on analytical concepts, analysis of various engineering problems was practiced more during the class sessions. So the students were able to perform good in the mid-term and end-examination.</p> <p>However MEC 201andIT 102 have not attained the target level</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Problem analysis oriented teaching 2. Conducted Tutorial sessions to solve engineering problems 3. Weaker student coaching 			

PO3	Design/development of Solutions		
PO3	0.95	1.07	TARGETLEVELATTAINED. Special attention were given to difficult subjects which exposed the students to develop solutions for various engineering problems. However CHM 201 T, CHM 201 P and CHM 202 T have not attained the target level
Action Taken			
<ol style="list-style-type: none"> 1. Practiced designing solutions of the engineering problems in the class room hours 2. Exposure to professional approach in solving complex problems 3. ICT enabled teaching 			
PO4	Conduct Investigations of Complex Problems		
PO4	1.27	0.74	TARGETLEVEL NOTATTAINED Class hours enriched with problems and case studies helped the students to get gather information about concepts and to solve the problems by investigating it. Since the syllabus is concentrated more on problem analysis, the classroom sessions helped the students in conducting investigations of complex engineering problems. However HU 101, MEC 201, PHY 101, PHY 201, IT 101andIT 102 have not attained the target level
Action Taken			
<ol style="list-style-type: none"> 1. ICT enabled teaching 2. Expert lectures 3. Conducted Technical events as part of Technical Fest & other professional body 			
PO5	Modern Tool Usage		
PO5	1.10	0.75	TARGETLEVEL NOTATTAINED Exposure to various training sessions boosted the exposure to usage of modern tools in the engineering streams. However MEC 201, CHM 201T and CHM 201 P have not attained the target level

Action Taken			
<ol style="list-style-type: none"> 1. Professional Training sessions 2. Demonstration of latest software tools like CAD and scripting languages 3. Conducted Technical events as part of Technical Fest & other professional body activities 			
PO6	The Engineer and Society		
PO6	0.86	0.59	<p>TARGETLEVEL NOT ATTAINED</p> <p>Commitment of an Engineer to the society was trained as part of curriculum. Various NSS activities were arranged to boost the duties and responsibilities of budding Engineers</p> <p>Seminar on Professional ethics conducted for the students which trained the students about the duties and responsibilities of the students. However MEC 201, CSE 201, CHM 201 T, CHM 201 P and IT 101 have not attained the target level</p>
Action Taken			
<ol style="list-style-type: none"> 1. Conducted Social Service activities as part of NSS 2. Expert sessions on Professional Ethics 3. Expert sessions on duties and responsibilities of Engineers in the society 			
PO7	Environment and Sustainability		
PO7	0.34	0.37	<p>TARGETLEVEL ATTAINED</p> <p>The sustainable engineering practices were included in the syllabus which enabled the students to learn more about the Environment and sustainability</p>
Action Taken			
<ol style="list-style-type: none"> 1. Conducted Social Service activities as part of NSS 2. Conducted sessions on sustainable engineering 3. Tutorials on sustainable engineering 			

PO8	Ethics		
PO8	0.28	0.47	TARGETLEVELATTAINED Instructions were given to the student regarding the professional ethics to be followed in the laboratory sessions Students were given training on ethics
Action Taken 1. Expert sessions on professional ethics 2. Class on engineering ethics to be followed by in streams 3. Training sessions on life skills			
PO9	Individual and Team Work		
PO9	0.36	0.45	TARGETLEVELATTAINED Lab sessions were conducted as individual / team work The social service activities are completed in teams
Action Taken 1. Conducted team based social service activities 2. Professional Training sessions as part of internships 3. Team based problem solving in laboratory sessions			
PO10	Communication		
PO10	0.66	0.67	TARGETLEVELATTAINED Students were given training on communication skills
Action Taken 1. Expert lecture in communication skills 2. Sessions in language lab 3. Competitions based on communications as part of cultural activities 4. Training on life skills			

PO11	Project Management and Finance		
PO11	0.57	0.59	TARGETLEVELATTAINED Understanding and demonstrating management principles and applying to own works enable students to get exposed to Project management
Action Taken <ol style="list-style-type: none"> 1. Professional Training sessions as part of internships 2. Class on engineering ethics to be followed by in streams 3. Expert lecture in communication skills 4. Financial management responsibility given to students in various technical events 			
PO12	Lifelong Learning		
PO12	0.57	0.92	TARGETLEVELATTAINED Made the students aware about the need, to prepare and to engage in independent and life long learning in various engineering streams
Action Taken <ol style="list-style-type: none"> 1. Team based problem solving in laboratory sessions 2. Professional Training sessions as part of internships 3. Expert lectures 			

POs Attainment Levels and Actions for Improvement (CAYM22011-2015)

PO	Target Level	Attainment Level	Observations
PO1	Engineering Knowledge		
PO1	1.76	1.65	TARGETLEVEL NOTATTAINED. Since students have basic background in subjects like Mathematics and Engineering Sciences the performance in the mid-term and end exam was pretty good. However IT 101, IT 102 P and CHM 202 P have not attained the target level

<p>Action Taken</p> <ol style="list-style-type: none"> 1. ICT enabled teaching. 2. Conducted problem oriented tutorial classes 3. Remedial classes for weaker students 			
PO2	Problem Analysis		
PO2	1.54	1.39	<p>TARGETLEVEL NOTATTAINED</p> <p>Since syllabus is focused on analytical concepts, analysis of various engineering problems was practiced more during the class secessions. So the students were able to perform better in the mid-term and end-examination. However MEC 201, PHY 101, IT 102 P, CHM 201 T, CHM 201 P and CHM 202 P have not attained the target level</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Problem analysis oriented teaching 2. Conducted Tutorial sessions to solve engineering problems 3. Weaker student coaching 			
PO3	Design/development of Solutions		
PO3	0.95	0.99	<p>TARGETLEVEL ATTAINED</p> <p>The tutorial hours conducted for all subjects has design problems and case studies, which exposed the students to design and develop solutions for various engineering problems. However MEC 201, CHM 201 T, CHM 201 P and CHM 202 T have not attained the target level</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Exposure to professional approach in solving complex problems 2. ICT enabled teaching 			
PO4	Conduct Investigations of Complex Problems		

PO4	1.27	0.81	TARGETLEVEL NOT ATTAINED Since the syllabus is concentrated more on problem analysis, the classroom sessions helped the students in conducting investigations of complex engineering problems. However HU 101, MEC 201 and PHY 101 have not attained the target level
Action Taken 1. ICT enabled teaching 2. Expert lectures 3. Conducted Technical events as part of Technical Fest & other professional body activities			
PO5	Modern Tool Usage		
PO5	1.10	0.72	TARGETLEVEL NOT ATTAINED Exposure to various training sessions boosted the exposure to usage of modern tools in the engineering streams. However MEC 201, IT 101 and CHM 201 P have not attained the target level
Action Taken 1. Demonstration of latest software tools like CAD 2. Conducted Technical events as part of Technical Fest & other professional body activities 3. Expert lectures			
PO6	The Engineer and Society		
PO6	0.86	0.61	TARGETLEVEL NOT ATTAINED Seminar on Professional ethics conducted for the students which trained the students about the duties and responsibilities of the students. However CSE 201 has not attained the target level

Action Taken			
<ol style="list-style-type: none"> 1. Conducted Social Service activities as part of NSS 2. Expert sessions on Professional Ethics 3. Expert sessions on duties and responsibilities of Engineers in the society 			
PO7	Environment and Sustainability		
PO7	0.34	0.34	<p>TARGETLEVELATTAINED</p> <p>The sustainable engineering practices were given which enabled the students to learn more about the Environment and sustainability</p>
Action Taken			
<ol style="list-style-type: none"> 1. Conducted Social Service activities as part of NSS 2. Conducted sessions on sustainable engineering 			
PO8	Ethics		
PO8	0.28	0.46	<p>TARGETLEVELATTAINED</p> <p>Instructions were given to the student regarding the professional ethics to be followed in the laboratory sessions</p> <p>Students were given training on ethics</p>
Action Taken			
<ol style="list-style-type: none"> 1. Expert sessions on professional ethics 2. Class on engineering ethics to be followed by in streams 3. Expert lectures 			
PO9	Individual and Team Work		
PO9	0.36	0.37	<p>TARGETLEVELATTAINED</p> <p>Lab sessions were conducted as individual / team work</p>

<p>Action Taken</p> <ol style="list-style-type: none"> 1. Conducted team based social service activities 2. Expert Lectures 3. Team based problem solving in laboratory sessions 			
PO10	Communication		
PO10	0.66	0.67	<p>TARGETLEVELATTAINED</p> <p>Students were given training on communication skills</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Expert lecture in communication skills 2. Sessions in language lab 3. Competitions based on communications as part of cultural activities 			
PO11	Project Management and Finance		
PO11	0.57	0.57	<p>TARGETLEVELATTAINED</p> <p>Understanding and demonstrating management principles and applying to own works enable students to get exposed to Project management</p>
<p>Action Taken</p> <ol style="list-style-type: none"> 1. Expert lectures 2. Class on engineering ethics to be followed by in streams 3. Expert lecture in communication skills 			
PO12	Lifelong Learning		
PO12	0.57	0.64	<p>TARGETLEVELATTAINED</p> <p>Recognize the need for, and have preparation and ability to engage in independent and lifelong learning in various engineering streams</p>

Action Taken

1. Team based problem solving in laboratory sessions
2. Professional Training sessions
3. Expert lectures

Table B.8.5.2b

CRITERION 9	Student Support Systems	Max. Marks: 50 Claimed: 50
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9.1 Mentoring System (5)

A new strategy to access and motivate students has been initiated. All faculty and students of all semesters are divided into mentor-mentee. One faculty will be assigned 10 to 15 students. They would look into assigned student's academic progress, discuss with tutor and other faculty about their behaviour in classroom and should observe any unusual behavioural patterns and incidents.

Mentoring at NIT SRINAGAR

- Mentoring of the students is our top priority. Each teacher takes keen interest to mentor students under their charge.
- Student Welfare Cell's members are always available to heed to the problems of the students. Students are always free to approach the teachers for any kind of guidance-personal, professional and so on. Students come with a burden and special endeavours are made to see that they get relieved of the burden.
- The students visit Students Welfare Centre where a lecturer (member of student Welfare) is made available throughout the day. Teachers come to the cell in their free periods. They counsel the students on diverse issues ranging from some personal psychological to social and academic.

A diary shall be maintained for each student where various details like Personal Information, Previous meeting details, Academic Performance, Competitive Examination Details etc. are recorded. The mentors meet the students periodically and monitor their performance and their activities. Guidance regarding the lagging issues is provided. If need be, occasionally a meeting with the parents will be conducted.

- **Professional Guidance:**

The departments are well equipped with knowledgeable human resources in the form of members of faculty who by keeping themselves updated of developments offer guidance to the prospective professionals in addition to the classroom teaching.

- **Career advancement:**

The Training and Placement cell has been active not only in arranging campus recruitment drives, but also offering awareness and training for the students.

- **Coursework:**

Members of faculty handling different courses interact with students in clearing all their Concept-oriented and test based mechanics of the respective courses. The teachers after first formal evaluation guide the students as far as student-specific grey areas are concerned.

□ **Lab-specific:**

Each of the lab sessions are handled by 2 teachers along with 2 to 3 non-teaching staffs, in order to have special care for the students while experiments are being handled. A demonstrative presentation is given by the teacher concerned before every experiment. The Laboratory records are evaluated after the experiment is held. In other words, there is active involvement of the members of faculty in pre-experiment stage, at the time of experiment and after the experiment.

Efficacy of the System:

- The mentoring system developed by the Institute has been proved to be effective considering different parameters.
- The involvement of students in the academics has increased, like class work attendance, paper presentations, presentation of models in exhibitions, participation in cultural activities etc.

Because the number of students allocated to each of the mentor is limited to maximum of 16, personal interaction on regular basis has been possible.

The specific support (or) services/facilities available

➤ **Support for “Back Loggers”**

Remedial classes have been initiated through a special drive for students with back logs. These classes are engaged by Students of higher semesters with outstanding performance in the given course for the students having backlog in that very particular course.

Slow learners are found out from the analysis of various assessment processes such as class test, continuous assessment test, lab viva session, interaction during the lecture delivery, and in mentoring session etc. These students are asked to discuss with the faculty in person during the extra hours such as Tutorial/Library/seminar hour/ Remedial Classes during evening stay back, in addition to the special classes conducted for those students. Slow learners are also asked to take up the retests for the respective subjects. They are also given special attention by solving the important problems in the form of additional worksheets and assignments.

➤ **Exposures of students to other institution of higher learning /corporate /business house etc.**

The students are exposed to the current trends in the industry by arranging guest lecture from the reputed institution and industries. The students are also encouraged to take up the in plant training in the industry to get the hands on experience about the current technology in the industries. The institute arranges for industrial visits to the students to get first-hand information about the industries and their technologies.

Alumni Connect.

Alumni of the institute have been involved very actively in the process of Career advancement of the current students. Our Distinguished Alumni have been very proactive and deliver Lectures regarding student requirements of career building. Every month Alumni with varying expertise in

industry, academia and successful entrepreneurship achievements are invited to have face to face interaction and deliver lectures related to their specific areas.

Memorandum of Understanding (MOU’s)

MOU’s with IIT Delhi and IIT Jammu have been signed for facilitating project work, Research and even earning of credits during the stay of the student at these institutes of higher learning. Facilitation of placement to be carried out at these campuses has also been agreed on.

For regular internship/training of students in current niche areas, a MOU has been signed with ALTTC Ghaziabad, a BSNL concern which basically meant for imparting training to ITS candidates.

➤ **Skill development (Spoken English, computer literacy, etc.)**

The language laboratory helps to improve the communication skills of students. The students are encouraged to give seminars to improve their communication and public speaking skills. Skill development is imparted to the students through Training and placement cell as well as Language department. Many activities like soft skills, communication skills, guidelines to access online materials, multimedia based learning, etc. are carried out for the sake of students. This is being upgraded to make it state-of-the art.

Language Laboratory	Space, Number of students	Software used	Type of experiments	Quality of Instruments	Guidance
1	300 Sq.ft. 30/shift	Internet support	Speaking, Listening, Reading	Good	Yes

Table B.9.1

➤ **Student’s Grievances Redressal**

Grievances should be presented in person and in writing before the Coordinator, HOD or Director. The concerned authority shall make an effort to solve the problem and redress the grievance informally but if he does not succeed in this, a grievance committee shall be formed, the composition of which shall depend on the grievance. The committee shall look in to the grievance objectively and having due regard to the rules and the institutional and academic goals, recommend appropriate action to redress the grievance.

Women Grievance Committee

Complaints Cum Redressed Committee for women is headed by Prof. Rohie Naaz Mir, HOD CSE department with additional members. If any of the girl students or lady faculty/staff faces a problem related to sexual harassment, they can report to the above committee. We have not received any such complaint for the past few years.

➤ **Anti-Ragging Committee**

Anti-Ragging committee headed by Dean Students Welfare, Wardens and Hostel manager is in place since long. Sign Boards have been put up specifically for this purpose all over the campus with strict warnings of not indulging in any such activity which would be considered as Ragging. Anti-ragging information leaflets are distributed to all first year students on their first day in the Institute. Anti-ragging measures are taken in the Institute campus, hostels and Institute buses.

➤ **Students Welfare / Counselling Centre**

The Institute has a Student's Welfare Committee, constituted by the Director and headed by Dean Students Welfare. This committee has faculty members from other departments as well. This committee is entrusted with the task of looking after the welfare of the students by taking appropriate steps with the concurrence of the Director.

Scholarships are doled out to deserving students from economically challenged background through a committee comprising faculty, staff and students representatives and chaired by Dean Students Welfare.

➤ **Continuing Education Cell**

Continuing Education Cell is headed by Prof. Aijaz A. Mir, of ECE department. Its function is to promote continuing education programmes in the institute. The cell is dedicated entirely to the growth and development of technical education, industry, business and social amelioration.

➤ **Industry – Institute Interaction Cell**

The functions of Industry – Institute Interaction Cell of NIT Srinagar is to create adequate facilities of updating knowledge of professional engineers to meet the growing and developmental needs of the industry and to coordinate the research and developmental activities of the two systems. The cell is headed by Prof. Saad Parvez.

➤ **Centre for Research and Development/Consultancy**

Centre for Research and Development/ Consultancy is formed at NIT Srinagar with the following functions and is headed by Prof. Aijaz Ahmad of EE Deptt.

- Provide technical assistance to industries and user Organizations/Departments
- Promote research and develop appropriate technology
- Promote exchange programmes between industries and the institution
- Support Short-term courses/Seminars/Workshops for effective dissemination of knowledge
- Establish testing/consultancy centres in various fields of engineering
- Extend the necessary assistance to Staff to attend National/International conferences,

Seminars, Workshops etc.

➤ **Corporate Social Responsibility:-**

Local Schools have been adopted to bring their students under the direct tutelage of our institute and invite them on occasions so as to instil in them confidence and inspire them with what different branches of engineering mean to the world at large. It gives them an opportunity to visit our labs and to have ample knowledge about engineering as a choice for career. Our faculty and students are invited by these schools to have a strong bond of belonging and Big Brother relation.

9.2 Feedback analysis and reward/Corrective measures taken, if any(10)

Feedback mechanism is a well-organized system in the institute. The system of feedback collection is being automated. For each student in a class a new ID is created, by using that the student can log into the feedback marking software without giving their names. Once they logged in to the software, the list of faculties taking courses in that class will be displayed. They can enter their feedback according to a questionnaire. The software will analyse the collected feedback and summary is given to head of department with marks secured. HOD will analyse the feedback of each faculty and will take necessary actions.

An overview of feedback evaluation for faculty members

No.	Item	Response
1	Feedback collected for all courses	YES
2	Specify the feedback collection Process	One regular class hour is designated for the purpose.
3	Who collects the feedback	Faculty members in charge of Student feedback
4	When feedback is collected	Around 12 weeks after semester commences
5	Percentage of students Participating	All students
6	Basis of reward / corrective measures	Faculty members who get a feedback below a pre-defined value are forwarded to higher authorities for corrective actions.

Table B.9.2a

Flowchart for feedback analysis process for faculty members

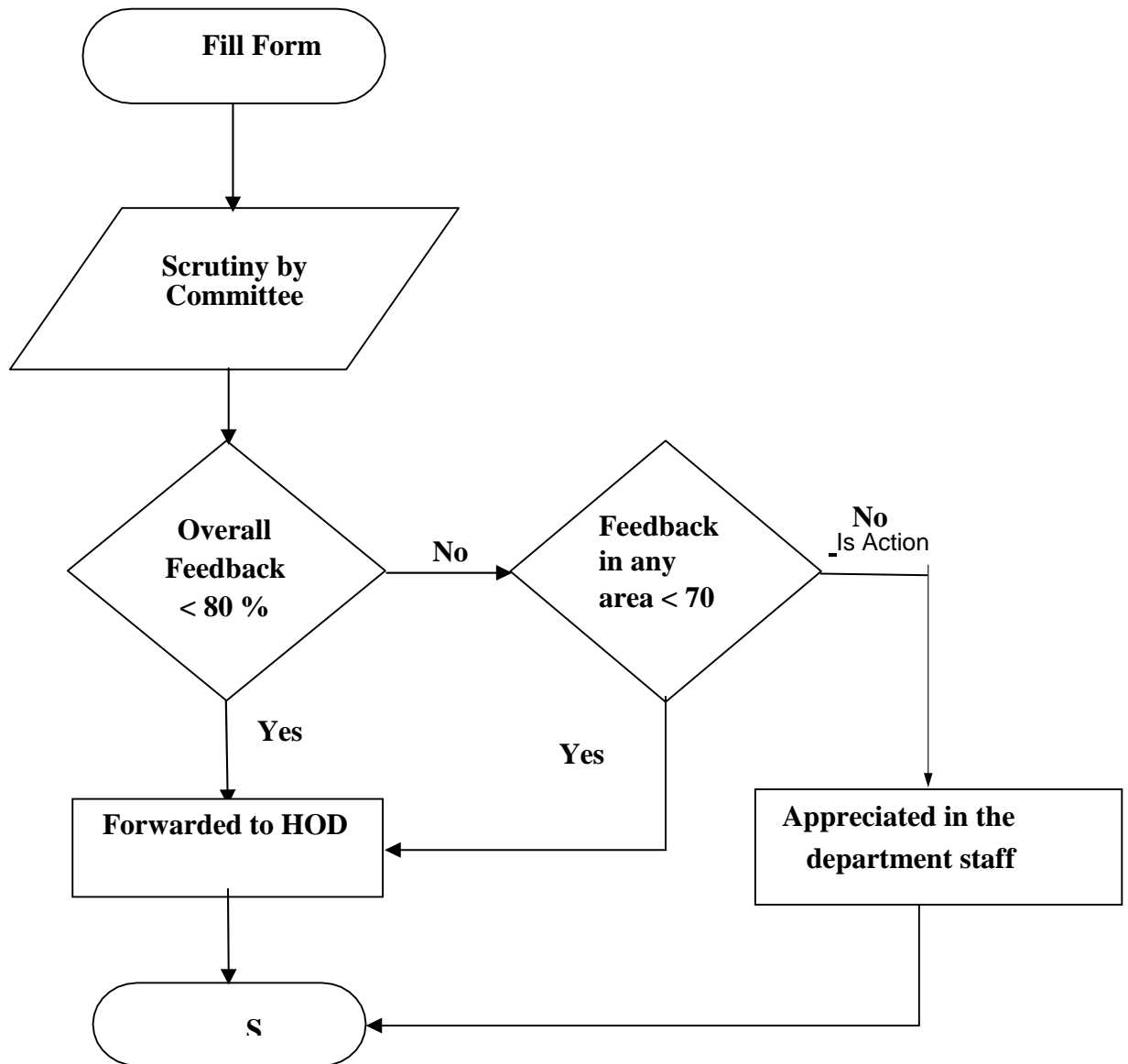


Figure B.9.2a

Basis of reward / corrective measures, if any:

Once HOD gets the summary of feedback, HOD analyses the feedback of each faculty and will take necessary actions. The procedure of corrective action is given in the flow chart

Flowchart for checking effectiveness of corrective action

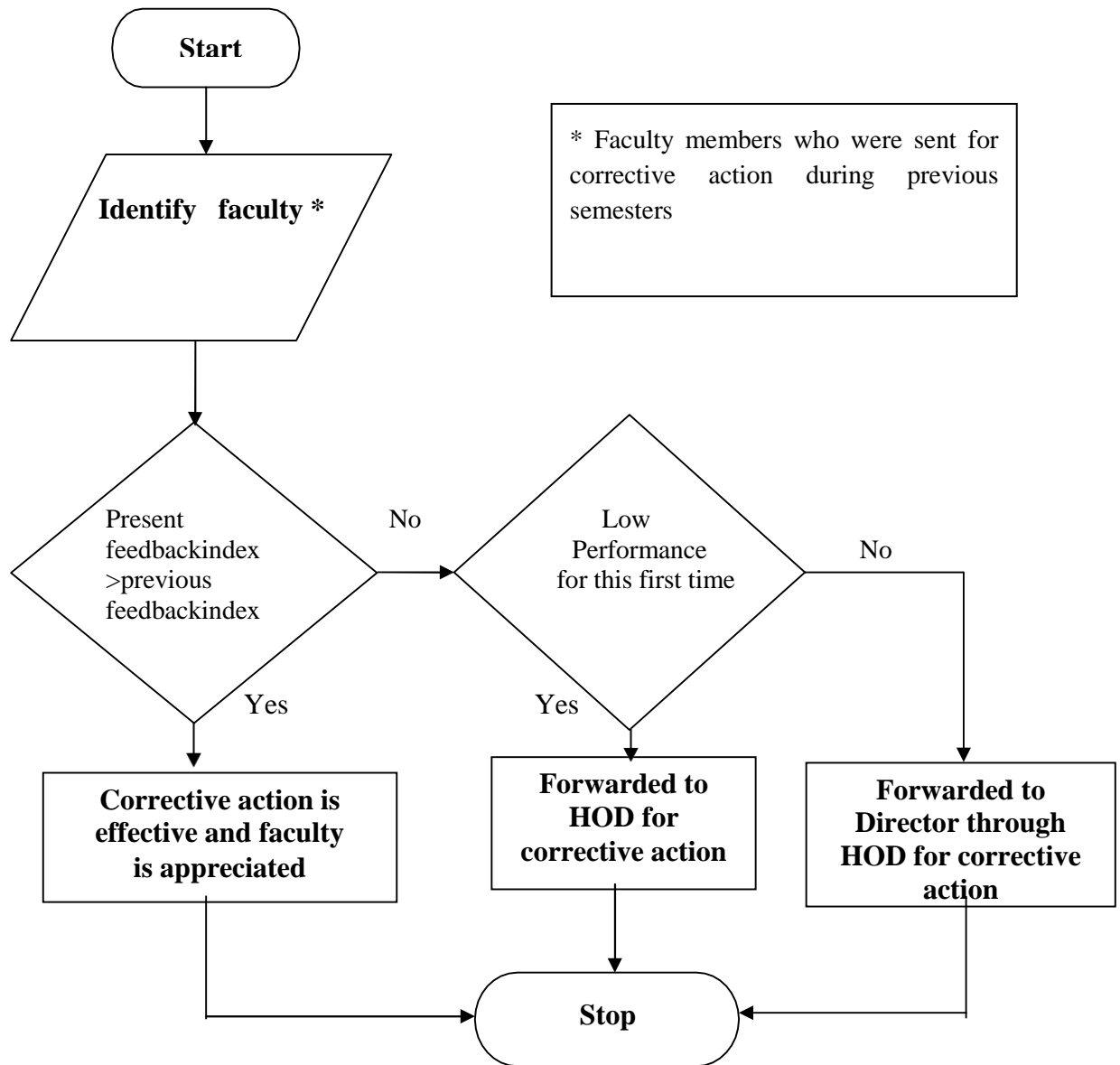


Figure B.9.2b

Induction programs are conducted for newly joined faculty members and continuing education programme for the experienced faculties. Those teachers who have not obtained good appraisals have a detailed discussion with the HOD on how to improve the teaching. Level of feedback is taken into account while evaluating the staff for promotion.

Also, Class Committee meeting shall be conducted twice in every semester for each class. Committee members include, Head of the Department, Class Tutor, Two faculty members teaching in the respective class, 2-5 student members from the class. Students are given freedom to raise any kind of issues related to teaching learning process, facilities provided or any other relevant matter.

Feedback analysis and reward /corrective measures taken for Hostels and Messes

The hostel/mess management has taken the following corrective measures:

- 1) Conversion of messes from outsource to in-source. It has been done to provide hygienic and quality food to the resident students.
- 2) Inclusion of student representatives in Mess Management committees for receiving frequent feedback from the respective mess representatives about the quality of food/services being provided in the messes.
- 3) Security personnel's have been deputed in each block/floor of the hostel to keep 24 x 7 vigil on the students to avoid any untoward incident, ragging etc.
- 4) Engagement of Electricians, Carpenter & Plumber on contractual basis exclusively for hostel maintenance and repairing to redress the student problems without any delay.
- 5) Procurement of electrical/carpentry/plumbing/water purifier items by the management directly for speedy redressal of problems.

9.3 Feedback on facilities(5)

Process of feedback evaluation

Institute has initiated taking feedback on facilities from the final year students. A feedback on Library facility, Training & Placement facility, Laboratory facility, general facility etc. has taken from students and they are asked to give rating of the same as Excellent, Good, Average. Just like the faculty feedback, facility feedback shall also be automated. By using the feedback, the areas of improvement can be identified.

Feedback Template

Library [tick mark in the relevant cell]

Questions			
1. How often do you visit the Library	Regularly	Occasionally	Rarely
2. Are the required number of titles in your Subject available in the Library	Excellent	Good	Average

3. Are you satisfied with the cataloguing and arrangement of books in the Library	Excellent	Good	Average
4. Are you satisfied with the available Reading space in the Library	Excellent	Good	Average
5. Are the Library Staff co-operative and Helpful	Excellent	Good	Average

Table B.9.3a

COMMON COMPUTING CENTER [tick mark in the relevant cell]

6. Are you able to access Internet Centre as and when you require	Regularly	Occasionally	Rarely
7. Are you making use of educational online Resources	Regularly	Occasionally	Rarely
8. Are there enough number of nodes Available in the Internet Centre	Excellent	Good	Average
9. Are the Net centre staff co-operative and Helpful	Excellent	Good	Average

Table B.9.3b

Training & Placement Cell [tick mark in the relevant cell]

10. Has the Training & Placement (T & P) Cell provided ample On-campus placement opportunities?	Excellent	Good	Average
11. Has the (T&P) Cell provided sufficient Off -campus placement opportunities?	Excellent	Good	Average
12. Did you ever avail Career counselling and guidance for higher studies from T&P Cell	Excellent	Good	Average
13. If you are invited to deliver A Guest Lecture/A Special Talk/A Motivational Session for your juniors, will you be interested?	Highly Acceptable	Acceptable	Likely

14. Would you like to join the Department/Institute Alumni Association?	Highly Acceptable	Acceptable	Likely
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Table B.9.3c

OTHERS [tick mark in the relevant cell]

15. Are the class rooms clean	Excellent	Good	Average
16. Are the toilets cleaned properly	Excellent	Good	Average
17. Are you provided with enough drinking Water	Excellent	Good	Average
18. Are you happy with the food served in the present canteen	Excellent	Good	Average
19. Are the activities of the student counselling centre helpful to you	Excellent	Good	Average
20. Do you think that your grievances are addressed effectively and efficiently	Excellent	Good	Average
21. Are you satisfied with the activities of “R&D , NSS, IEEE and other professional bodies” in our Institute	Excellent	Good	Average
22. Are you able to make use of Reprography facility in the Institute	Excellent	Good	Average
23. Are you satisfied with the prevailing scholarship programme of our Institute	Excellent	Good	Average

Table B.9.3d

Feedback on Lab Facilities

Title of Lab			
What was your batch Size?			
Satisfied with your batch Size?	Excellent	Good	Average
Experiments of Lab Classes conducted as per schedule provided?	Excellent	Good	Average
Equipment's provided sufficient?	Excellent	Good	Average

Equipment's provided in working condition?	Excellent	Good	Average
Lab Consumables provided of Good Quality?	Excellent	Good	Average
No. of experiments conducted as per University Norms?	Excellent	Good	Average
No. of experiments conducted over and Above University Syllabus?	Excellent	Good	Average
Advanced/Design based Experiments carried out in the lab?	Excellent	Good	Average
Lab Manual Provided was complete in covering the Syllabus and informative?	Excellent	Good	Average
Lab assistant / technician assisting You	Excellent	Good	Average
Lab in-charges (Faculties) are helpful in Completing the Experiments	Excellent	Good	Average
Opportunity provided to complete experiments partially done Expand for days on which students were absent	Excellent	Good	Average

Table B.9.3e

The identified weaker areas, with corrective action plan are submitted to the management and the same can be corrected within one academic year and then the feedback is taken from the next final year students.

Process flowchart for feedback analysis on facilities

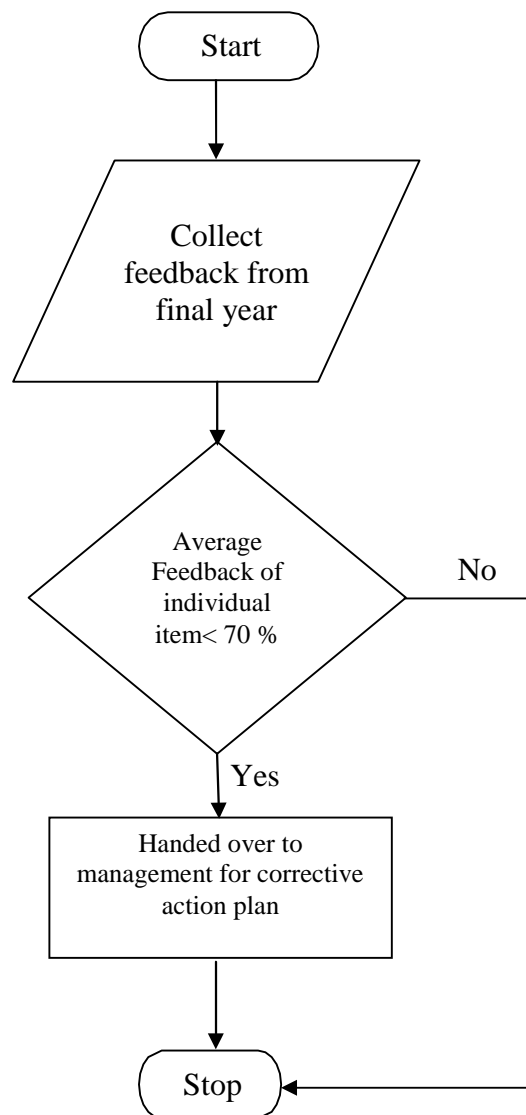


Figure B.9.3

Information regarding feedback on facilities

The Hostel Management is providing the following facilities to the resident students of the Institute. Upgradation of facilities is in process as well as in pipeline.

S. No.	Particulars	Facilities Provided/Upgraded/In Pipeline
01.	Community Services	<p>Students are being facilitated with funds for community services to induce social fabric & communal harmony in them as under:</p> <ul style="list-style-type: none"> i) Erection of tent in the premises of Hazratbal shrine on the eve of Eid-e-Milad-un-Nabi (Commemoration of birthday of Prophet Muhammad PBUH) and facilitating the devotees with water/juice or even with tea depending upon the season. ii) Erection of tent in the premises of Chatti Padsha on the eve of Guru Gobind Singh's Birthday, Guru Hargobind Singh's Birthday etc. and facilitating the devotees with kheer, sweets etc. iii) Erection of tent in the premises of Kheer Bhawani on the eve of mela to facilitate the devotees with kheer, sweets etc.
02.	Hostel Facilities	
	i) Water Purifiers	Water Purifiers have been installed in sufficient numbers in each block of the hostel to facilitate the student community with purified water supply.
	ii) Furniture	New furniture is being procured i.e. lockers, beds and tables to facilitate the students with requisite furniture to make their stay in the hostel comfortable.
	iii) Wi-Fi/LAN	Each block/wing of the hostel has been connected with Wi-Fi/LAN.

	iv) Parks and Lawns	Hostel Management has developed & beautified parks and lawns so that students can have leisure during their off time. Furthermore, umbrellas have been installed in the parks to facilitate the student community.
	v) Badminton Court	Badminton court has been constructed in each hostel of the Institute.
03.	Up gradated facility	
	i) Laundry facility	The Hostel Management has procured commercial washing machines to facilitate the student community with washing facility. The facility will be commenced soon.
	ii) Construction of hostels	The Institute has constructed two prefabricated hostels so that occupation of rooms could be minimized to some extent. The hostels will be allotted to the students soon.
	iii) Modernization of Messes	Each mess of the Institute has been modernized with latest kitchen equipment's i.e. rice steamers etc.
04.	In Pipeline	
	i) Static Tent Structures	Erection of static tent structures work is in progress for facilitating the students with Guest Lobby, Reading Room, Library, Food Court etc.
	ii) Water Treatment Plant	Construction of mini water treatment plant in the hostel premises.
	iii) Mopping Scooter/Jet Cleaners etc.	Procurement of mopping scooters and latest sanitation equipment's to modernize the sanitation services in the Institute as well as in the hostels
	iv) AC	AC's will be installed in each of the hostel.
05.	Financial Assistance	
		The Institute is providing financial assistance to the needy students every year so that they can continue their studies.

Table B.9.3f

CENTRAL FACILITY

Central Workshop

- Workshop is Central Facility of the Institute.
- The primary objective of the establishment of Central Workshop is to conduct the classes of one of the main practical oriented course "**Workshop Practice**" to fulfill the basic requirement of B.Tech course.

MAIN OBJECTIVE

Central Workshop caters to various activities of the Institute which includes:

- Engages the classes of practical oriented course of workshop practice in 1st and 2nd semesters for (All) B.Tech courses.
- Provides facility to carry out practical's in various engineering trades to Mechanical and Metallurgical students.
- Plays an important role to design, development and fabrication of project works of the students from various departments of the Institute.
- Project work related activities including fabrication for the M.Tech students and Ph.D Research Scholars of the Institute.

Extension of Workshop facility to other technical institutions in the region.

The following institutions are benefitted:

- College of Engineering and Technology University of Kashmir, Hazratbal Srinagar
- Government Polytechnic for Women, Bemina Srinagar
- North campus, university of Kashmir Baramulla
- I.T.I Srinagar
- Islamic University Awantipora Kashmir
- Government Engineering College of Technology, Safapora Kashmir

Technical Aid and Fabrication to Industries

Facilitating the technical aid to the **small scale industries of Kashmir** Province in the shape of fabrication of various types of Tools Dies and Jigs and Fixture and Gears etc.

INFRASTRUCTURE

Well established Technical Infrastructure is available which includes:

(i) Machine (ii) Equipment (iii) Tools (iv) Technical Manpower

Workshop Practice provides facilities to be students for "hands on" various practical oriented tasks through formal classes /project works. The students are introduced to process, tools and materials for accomplishing various tasks which culminate in final products.

The students are trained to acquire basic knowledge and skills about engineering materials, manufacturing practices, equipment, tools and safety precautions to be observed during manufacturing of different products. The students carry out manual operations using mostly hand tools and elementary machines in the carpentry and pattern making shop, bench work and fitting shop, welding shop, sheet metal shop, black smithy and forging shop, machine shop, foundry and casting shop etc..

The common shops and major facilities in the Central Workshop have been divided into various trades as given below:-

- i. Machine Shop
- ii. Sheet Metal Shop
- iii. Bench Work and Fitting Shop
- iv. Welding Shop
- v. Foundry and Casting Shop
- vi. Black Smithy and Forging Shop

- vii. Carpentry and Pattern making Shop
Staff associated with Central Workshop

Office of the Central Workshop

S. No.	Workshop office Staff
1.	Er. Syed Irshad Ahmad Qadri Officer In-charge Superintendent
2.	Mr. Ghulam Mohammad (Tech Asst)
3.	Mr. Muneer Ahmad (Tech)
4.	Mr. Manzoor Ahmad (Works Asst)

S.No	Workshop Section	Working Equipment/Machine	Employees (Permanent)	Employees Contractual
1.	Machinist Trade	Kirloskar Lathe 8 No's HMT Lathe 4 No's Slotting Machine 1 No's Horizontal Milling 1 No's Vertical Milling 1 No's Shaper 1 No's Grinding Machine 1 No's Tool & Cutter Grinding M/C 1 No's Surface Grinder 1 No's Kirloskar Lathe with tool Dynamometer 1 No's	Firdous Ahmad Wani (Tech. Asst) Javeed Ahmad Ahangar(Tech.) Hilal Ahmad Dar(Tech.) Altaf Ahmad Bhat(Tech.)	Mistry Mohammad Nadeem (Technical Assistant)
2.	Sheet Metal trade	Hand drill 1 No's Sheet bending machine 1 No's Hand shearing machine 1 No's Table shear cutting machine 1 No's Power operated shearing M/C 1 No's Grinding machine 1 No's	Muhammad Shabaan(Tech.)	Ms. Afnan Asad (Technical Assistant). Abdul Aziz (Helper).
3.	Fitting Trade	Profile Projector 1 No's Drilling Machine 1 No's Arbor Press machine 1 No's	Gh. Qadir(Tech. Asst) Mushtaq Ahmad Shah(Tech.) Mohammad Ramzan(Tech.)	Dawood Ibrahim Ali (Technical Asstt)
4.	Smithy Trade	Single Beak Anvil 2 No's Open Herth Furnace 4 No's Lever Shear 1 No's	Mohd. Ismail Kumar(Tech. Asst) Bashir AhmadSheikh(Tech.)	Sumeer Kaul (Technical Assistant)
5.	Foundry Trade	None.	Abdul MajeedAhangar (Tech. Asst) Ghulam Rasool Telli (Tech.)	Zahid Shafi (Technical Asstt)
6.	Welding Trade	MMA (Arc Welding) Machine 1 No's	Zahoor Ahmad (Tech.) Mohammad ShafiChikla (Tech.)	Mohd. Yousuf (Technical Assistant)
7.	Carpentry	Band Saw 1 No's Thickness Planner 1 No's	Showkat Ahmad(Tech.)	MuzafarShah (Technical Assistant)

		Tenon Machine Grinder Thickness Planner	1 No's 1 No's 1 No's	Noor Mohammad(Tech.) Mohd. Yousuf(Tech.)	
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Transport/Automobile facilities

The transport wing of the Central Workshop performs the essential service to the Institute. Presently the institute is having the vehicle strength of nine numbers to carry out the various academic activities of students, faculty and other official works of the institute besides to provide the facility of ambulance services round the clock (24 x 7) during the emergency to the students and staff.

The list of the vehicles performing the various activities of the institute is as under:-

S. No	Name of the Vehicle with make	No of Vehicles	Drivers and cleaners in place	
			Permanent	Contractual
01	32 seater Bus (TATA)	02 Nos	Mr B.Bhadhur (Tech. Asst)	Mr Showkat Ahmad (Driver)
02	Ambulance (Maruati)	02 Nos		
03	Staff Car (Ambassador)	01 No	Mr Khazir Mohammad (Tech Asst)	Mr Reyaz Ahmad (Driver)
04	Mini Loader (Truck)	01 No		
05	Fortuner Car (Toyota)	01 No	Mr Mohd Ayoub (Driver)	Mr Shabir Ahmad (Driver) MrSheraz Ahmad (Driver) Mr Mohammad Yaseen (Conductor)
06	Innova Car (Toyota)	01 No		
07	Scorpio Car (Mahindra)	01 No		

MEDICAL FACILITIES

NIT Srinagar has its own dedicated Health centre & multifarious medical needs of the campus population consisting of students, staff members, faculty and members of their families are met by institute hospital. It's equipped with all the basic medical facilities and is functional 24*7 with referral and ambulance services. Presently health centre is serving the strength of more than 4000 students plus faculty and staff including their wards. It offers free of cost medical facilities. The hospital is headed by the Head Medical Officer with a team of other specialists, paramedical and supporting staff.



FACILITIES

List of facilities available at NIT Srinagar Health Centre :

OPD (ALLOPATHY)

Patients are registered at the reception and are seen on first come, first serve basis, however out of turn consultation may be provided in case of emergency and senior citizens. Patients have the right to consult any doctor. In OPD, clinical consultation is provided to patients which include history taking, clinical examination, diagnosis and providing prescriptions to patients besides advising laboratory tests in some cases. Medication is provided free of cost to the patients. Sub waiting areas are available in front of individual consultation rooms and laboratory. Public utilities like drinking water and toilet is available. Wheel chairs, trolleys and attendants are there to help very sick patients.



- **DENTAL FACILITY**

An experienced dental surgeon along with dental assistant provides procedures like dental extraction, scaling/cleaning, RCT, fillings, local curettage. Dental facility is functional from April 2018.



- **COUNSELING SERVICES**

Full time psychological counselor who remains on call 24*7 is available for providing counseling services to the students, staff and faculty members of the institute. Institute counselor pays regular visits to different hostels for conducting awareness programs like stress management, mental health awareness, positive psychology, psychology of happiness &

different
breathing
exercises.



- **WARD/IPD FACILITY**

Ward facilities for observation and management of medical problems like typhoid, acute gastroenteritis, COPD, bronchial asthma, viral fever, pneumonias etc are available. There is one ward with five beds & one isolation room for patients of communicable diseases who require complete isolation.



PHYSIOTHERAPY SERVICES

Full time well experienced physiotherapist is available 24*7 to provide range of physiotherapy services and to assist the patients to recover from wide range of musculoskeletal painful disorders, sports injuries, post operative traumas, neurological disorders and all orthopedic disorders. This facility is functional since February 2018. Following facilities will be available shortly after the establishment of physiotherapy unit; TENS, Laser therapy traction unit, Ultrasound, SWD, Muscle stimulation, Interferential therapy, Matrix Therapy Etc.



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- LABORATORY SERVICES

Trained laboratory staff is providing best services & the laboratory is functional 24*7. Painless blood withdrawal & sample collection under all aseptic conditions is done in the laboratory.

Following facilities are available;

- CBC
- Lipid profile
- KFT
- LFT
- Uric Acid
- Blood sugar fasting and PP
- HbA1C
- ESR
- CRP, CCP, RF
- Serum LH, FSH, Prolactin, total testosterone
- Thyroid Function Tests
- Vitamin D levels
- HBSAG
- HIV
- HCV
- Vidal for typhoid
- Urine Routine examination

- Sample collection time for laboratory is 7am to 10 am while emergency tests like Blood sugar, platelet count, HB and blood grouping is done in emergent cases throughout OPD hours.



- X-RAY & ECG SERVICES

X-Ray and ECG services are available on all working days during OPD hours & in case of emergency.

- PHARMACY

Free reliable quality medicines are available to beneficiaries on doctor's prescription during OPD and night hours by pharmacists.



- **MINOR OT**

Provides services for minor surgical procedures like dressing of lacerated wounds, suturing of minor lacerations and re-suturing, excision of corns and cysts under local anesthesia.



- **AMBULANCE SERVICES**

24*7 patient referral and transport services are available during OPD hours as well as emergencies to the nearest super specialty hospitals.

- **TIMINGS**

- Registration/OPD timings- On working days 8:45 a.m to 05:15 pm.
- Laboratory series – 24*7
- Pharmacy – 24*7
- X-ray & ECG services - 8:45 am to 05:15 pm and during emergency.
- In case of emergency Medical officer, physiotherapist, counselor are available on call 24*7.

PEOPLE /STAFF:

S.NO	NAME OF THE OFFICIAL	DESIGNATION	PHONE NO.
01.	Dr Mehvish Khan	Head (Hospital Services)	7006880314
02.	Dr Mehnaz Rajab	Dental Surgeon	7006563082
03.	Dr Younis	Physiotherapist	9149729529
04.	Mr Mumtaz	Sr. Lab Technician	9906046953
05.	Mr Fairoz Malla	Psy Counselor	9596195546

06.	Mr Lateef	Store Keeper	9149922458
07.	Mr Fayaz Ali	Pharmacist	9796103421
08.	Ms Gincy Paul	Staff Nurse	7780897925
09.	Mr Irfan Sidiqi	X-Ray & ECG Technician	7006428525
10.	Mr Rouf	Pharmacist	7889399568
11.	Mr Waseem Rashid	Lab Assistant	7780923252
12.	Mr Khalid	Pharmacist	9596596880
13.	Mr Nisar	Lab Technician	7006349408
14.	Ms Nazima	Dental Assistant	7006244208
15.	Mr GM Teli	Orderly	8715913281
16.	Mr Bashir Ahmad	Orderly	9796968788
17.	Mr Mushtaq Ahamd	Orderly	9149516758
18.	Mr Showkat	Ambulance Driver	8491967214
19.	Mr Shabir	Ambulance Driver	9622827668

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- SPECIAL CAMPS AND PROGRAMS CONDUCTED:-

- Influenza vaccination (November 2017)
- Blood donation camp (June 2018)
- Mental health Workshop (May 2018)
- Disaster Management Programe (July 2018)
- Bone Mineral Density Camp (June 2018)
- Hemoglobin evaluation drive (June2018)

9.4 Self-Learning(5)

The Institute developed an academic system which presents a curriculum which is having flexibility without prejudice to the fundamentals of any subject which are required.

Facilities given by institution for self-learning

- The curriculum offers courses major project where the topics are self-selected or based on guidesuggestion. The component of self learning is evaluated in these courses.
- Every student has to submit two home assignments in every course which has been evaluated for 10 marks. Some of these tasks are beyond syllabus to encourage outstanding students to develop their self-learning capabilities.
- Some of the tasks in the lab courses are challenge based which has to be solved by the students on their own enhancing their skills.
- The program planned weekly time table and facilities in such a way that the students have space and time to explore and implement their ideas.
- Common Computing Centre with well-equipped and internet facility opened 24X7 for students.
- Digital library is provided in central library where students can access all kinds of E- journals.
- Industrial visits arranged by the Departments.

- Language lab facilities provided – This enables students to prepare to take-up the TOEFL, GRE examinations.
- The Institute encourages the students to attend Industrial training during semester breaks

Modes and Modules for self-learning and learning contents beyond syllabus:

Seminars

Seminars are taken on the recent research topics. Faculties of various departments can attend these seminars in their respective areas. This enable the faculty to get familiar with the recent researches carried out in various fields.

Department Laboratories

The Institute provides well equipped laboratories for the smooth functioning of each department and the details of the same are as follows.

Department	Total No. of Labs	Name of the laboratory	
Chemical	12	1	Fluid Mechanics and Mechanical Operations Laboratory
		2	Mass Transfer Laboratory
		3	Process Dynamics & Control Laboratory
		4	Thermodynamics and Reaction Engineering Laboratory
		5	Heat Transfer Laboratory
		6	Energy Engineering Laboratory
		7	Biochemical Engineering Laboratory
		8	Environment Engineering Laboratory
		9	Membrane Science and Technology Laboratory
		10	Multiphase System Laboratory
		11	Project Lab
CE	12	1	Fluid mechanics Lab
		2	SOM Lab
		3	Concrete Technology Lab
		4	Pavement Engg. Laboratory
		5	Environme-ntal engineering lab
		6	Structural Analysis Lab
		7	CAD Lab

		8	Traffic Engg. Lab
		9	Survey Lab
		10	Geotechnical Engg. Lab
		11	Engg. Geology lab
		12	Project Lab
ECE	10	1	Communication Systems Laboratory
		2	Microprocessor Laboratory
		3	Digital Electronics Laboratory
		4	Analog Electronics Laboratory
		5	Microwave Engg. Laboratory
		6	Optical Fiber Communication
		7	Electronic Design & Automation Tools -II
		8	VLSI Lab
		9	Network Security Lab
		10	Computational Lab
		11	Project Lab
ME	12	1	Steam lab
		2	Production Technology Lab
		3	Fluid Mechanics Lab
		4	Internal Combustion Engines Lab
		5	Tribology Lab
		6	Heat Transfer Lab
		7	Mechatronics Lab
		8	Dynamics Lab
		9	CAD Lab
		10	Industrial Engineering Lab
		11	Advanced Strength of Material Lab
		12	Project Lab
EE	12	1	Basic Electrical Engineering Lab
		2	Control Systems Lab
		3	Electrical Measurement Lab
		4	Power Systems Lab
		5	Power Electronics Lab
		6	Electrical Machines Lab

		7	Microprocessor and DSP Lab
		8	Computation Lab
		9	High Voltage Engineering Lab
		10	Virtual Instrumentation Lab
		11	Energy Systems Lab – (For Research Scholars)
		12	Project Lab

Table B.9.4a

Library Facility

The Central Library of National Institute of Technology was established in the year 2001. It is housed in an area of 16400 Sq. ft. spread over two floors and caters to the information needs of the faculty, staff and students. It is fully automated with a rich collection of Books, National and International Journals, Technical and other Magazines, CD ROMs on Engineering, other widely appreciated editions on diverse subjects like Literature, Management, Religion etc. so that the students can evolve into excellent professionals and good cultured human beings. The collection comprises 36186 printed documents such as books, project reports, seminar reports and back volumes of journals and the non-book materials like CD ROMs. This Library follows open access system, Bar code based circulation process and OPAC Literature Search.

The central library currently subscribes to around 106 (128- including MBA) scholarly journals in engineering, science and humanities. This library provides on line access to a large number of full text journal databases from various publishers. These e-journals are accessible on intranet to campus users only. Membership of the library is open to Students, Teachers and Non-Teaching Staff of this Institute. Library membership is free to all faculty, staff and students. Documents are classified according to Dewey Decimal Classification Scheme and catalogued according to Anglo American Cataloguing rules II with local modifications. Dictionary catalogue in card form is maintained for authors only. The NIT Srinagar Central Library has an excellent collection of valuable Books, Journals, Technical magazines, News Papers and no-book materials in Engineering and Technology, Science, Humanities and Management. It maintains separate collections of reference books, general books and Engineering and Technology books, bound volumes of journals, reports, CD ROMs.



Figure B.9.4a

a) Books

Details of books in the Central library are as shown below.

SECTION	DEPARTMENT	NO. OF VOLUMES	NO. OF TITLES
CENTRAL LIBRARY	Civil	2300	552
	Mechanical	3943	1202
	Chemical	1762	221
	Electrical	4203	1052
	Electronics	7037	920
	Computer Science	7207	1384
	Information Technology	3993	928
	Science	1813	461
	General	1335	1025
	Management	559	164
	TOTAL	34152	7909
MBA	5572	2678	
TOTAL	39724	10587	

Table B.9.4b

b) Digital Library

The reading area in the library has been Wi-Fi enabled to provide wireless access to the Internet. Users are welcome to use their laptops in the library. 60 PC head phones are meant for users to access databases, e-books, e-journals and other e-resources. One printer is for taking printouts from the e-resources.

c) E-Resources

The library provides IP enabled access to a large number of full texts on line journal databases from the various publishers.

1. IEEE(ASPP)
2. ASME
3. ASCE
4. Springer
5. DELNET (Developing Library Network)
6. National Digital Library

And also provides free online journals relating to engineering and other subjects through directory of open access journals (DOAJ).

d) Journals

The Library receives 106 Printed Journals, Technical Magazines, News Papers and the library provides IP enabled access to a large number of full texts on line journal databases from the various publishers.

The details of International and National Journals, Periodicals & Dailies for the Institute are as follows.

Department	Journal Type	name of International/ National Journals
CE	National/ International	1. Indian Concrete Journal
		2. Journal of Structural Engineering
		3. Journal of the Institution of Engineers Series A (Civil, Architectural, Environmental & Agricultural Engineering)
		4. International Journal of Sustainable Civil Engineering
		5. International Journal of Geotechnics and Environment

		6. Journal of Urban Planning and Development
		7. Journal of Environmental Science Research International
		8. Journal of Flood Engineering
		9. ICI Journal
		10. Indian Journal of Microbiology
		11. Indian Geotechnical Journal
		12. International journal of civil Engineering
		13. ACI Structural Journal
		14. ACI Materials Journal
		15. Water and Energy International
CSE	National/ International	1. International Journal of Computer and Internet Security
		2. International Journal of Multimedia, Computer Vision and Machine Learning
		3. International Journal of Neural Networks and Applications
		4. International Journal of Real-Time Systems
		5. International Journal of Computer Science and Information Engineering
		6. International Journal of Data Warehousing
		7. Journal of Digital Information Management (+on line)

		8. International Journal of Computational intelligence Research and Application
		9. Journal of Intellectual Property Rights
		10. International Journal of Computing and Application
		11. Journal of Advanced Research in Computer Engineering
		12. International Journal Of Artificial Intelligence And Computational Research (IJICR)
		13. International Journal Of Bioinformatics And Soft Computing (IJBSC)
		14. International Journal Of Computer Science And Communication
		15. International Journal Of Computer Mathematical Sciences And Applications
		16 International Journal Of Grid Computing And Multi Agent Systems (GCMAS)
		17. Journal of Cybernetics and Systems
		18. International Journal of Computer Engineering and Software Technology
		19. International Journal of Network Security & Research
		20. International Journal of Wireless Sensors, Networks and Applications
		1. Indian Journal of Electronic and Electrical Engineering
		2. Advances in Wireless and Mobile Communication
		3. Journal of Microwaves, Science and Technology

ECE	National/ International	4. Journal of Wavelet Theory and Applications
		5. Advances in Electronic and Electrical Engineering
		6. International Journal of Electronics
		7. Indian Journal of Electronics, Circuits and Systems
		8. International Journal of Mobile Communication and Networking
		9. Indian Journal of Wireless Networks and Communication
		10. SADHANA: Academy Proceedings Engineering Science
		11. International Electronics Engineering
		12. International Journal of Material Research, Electronics And Electrical Systems
		13. International Journal Of Power Engineering (IJPE)
		14. International Journal of Analog circuits, VLSI and Bioelectronics
		15. International Journal of Embedded Software and open Source Systems
		16. International Journal Of Electronics, Computing And Engineering Education
		17. International Journal of Advances in VLSI Design
		18. International Journal of Wireless Networks and Communication
		19. International Journal of Electronics and communication engineering

		20. International Journal of Wireless Communication and Simulation
ME	National/ International	1. Journal of Scientific and Industrial Research
		2. Indian Journal of Engineering and Materials Science
		3. Journal of the Institution of Engineers series C (Mechanical, Aerospace, Production, Marine Engineering)
		4. International Journal Of Advances In Thermal Sciences And Engineering
		5. International Journal Of Advances In Mechanical Engineering
		6. International Journal Of Fluid Mechanics
		7. International Journal Of Manufacturing Technology And Industrial Engineering
		8. International Journal Of Material Science And Engineering
		9. International Journal Of Mechanical Engineering
		10. International Journal of Nanoscience, Nano engineering And Nano Technology
		11. International Journal Of Aerospace And Electronics Systems
		12. International Journal of Machine Intelligence & Applications
		13. International Journal of Manufacturing Science & Technology
		14. International Journal of Nanomaterial & Technology
		15. International Journal of Production & Quality Engineering
		16. International Journal of Production Technology & Management Research

		17. International Journal of Advances in Mechatronics and Robotics
		18. International Journal of Advanced Mechanical Engineering
		19. International Journal of Advances in Machining and Forming Operations
		20. International Journal of Advanced Manufacturing System
IT	National/ International	1. International Journal of System Simulation
		2. International Journal of Computer, Information Technology & Engineering
		3. Journal of Non Linear Analysis & Applied Mathematics
		4. International Journal of computer Science and system Analysis
		5. International Journal of Advance in Information Technology.
		6. International Journal of Intelligent Information Processing.
		7. Journal of High Performance Communication Systems and Networking.
		1. Journal of Image Processing & Applications
		9. International Journal of Neural Systems Theory and Applications
EEE	National/ International	1. Indian Journal of Power and River Valley Development
		2. The Journal of CPRI
		3. IEEMA Journal
		4. Journal of the Institution of Engineers series B (Electrical, Electronics, & Telecommunication & Computer Engineering)

		5. Indian Journal of Electrical Engineering & Computer Engineering
		6. Indian Journal of Systems Engineering & Electronics
		7. Indian Journal of Advances in Electrical Engineering
		8. Indian Journal of Electrical Engineering & Modern Technology
		9. Journal of Energy Storage & Conversion
		10. International Journal of Electronic and Electrical Engineering
		11. International Journal of Electrical Engineering and Embedded Systems
		12. International Journal Of Power System Optimization
		13. International Journal Of Control Theory And Applications (IJCTA)
		14. International Journal of Power System and Power Electronics Engineering
		15. International Journal of Industrial Electronics and Control
Chemical	National/ International	1. Journal of Membrane Science
		2. Desalination
		3. Applied Clay Science
		4. Journal of the European Ceramic Society
		5. Ceramics International
		6. Journal of Food Engineering
		7. International Journal of Hydrogen Energy
		8. Solid State Ionics
		9. Filtration + Separation
		10. Applied Surface Science
		11. Separation and Purification Technology
		12. Journal of Catalysis
		13. Chemical Engineering Research and Design
		14. The Chemical Engineering Journal
		15. Heliyon
		16. Biomass and Bioenergy

		17. The Chemical Engineering Journal and the Biochemical Engineering Journal
		18. Chinese Journal of Catalysis
		19. International Journal of Heat and Fluid Flow
		20. International Journal of Heat and Mass Transfer
		21. International Journal of Multiphase Flow
		22. Journal of Bioscience and Bioengineering
		23. Journal of Chemical Health and Safe
		24. Journal of the Chinese Institute of Chemical Engineers
		25. Journal of Environmental Chemical Engineering
		26. Journal of Hazardous Materials
		27. Journal of Loss Prevention in the Process Industries
		28. Journal of Safety Research
		29. Journal of the Taiwan Institute of Chemical Engineers
		30. South African Journal of Chemical Engineering
		31. Journal of Water Process Engineering
		32. Journal of Saudi Chemical Society
		33. The Journal of Supercritical Fluids
		34. Journal of Process Control
		35. Journal of Non-Newtonian Fluid Mechanics
		36. Journal of Biotechnology
		37. Chinese Journal of Chemical Engineering
		38. Applied Thermal Engineering
		39. Gas Separation & Purification

Table B.9.4c

Web OPAC (Online Public Access Catalogue)

The catalogue of Books/CDs/ journals etc. is available online and LAN. Visiting our URL one can access the catalogue sitting at home through internet.

The features of web OPAC are:-

- Search facility: By specifying author, Title, subject, year of publication or any other relevant field.
- Status of the book: Whether the book is available or issued.
- Number of copies available in library.
- Due dates for borrowed books,

NPTEL

The National Programme on Technology Enhanced Learning (NPTEL), a project funded by MHRD, provides e-learning through online web and video courses in engineering, Sciences, Technology, Management and Humanities. This is a joint initiative by seven IITs and IISC Bangalore. Other selected premier institutions also act as Associate Partner Institutions.

Industrial Visits

All the departments of the institution provide facilities for industrial visit. The students identify reputed industries from their discipline and are approved by the Director through the head of the department. The prior permission is obtained from the industry to visit it. The students are accompanied by minimum of two faculty members. During the curriculum two one day visits and a 3 to 5 days visit reorganized.

9.5 Career Guidance, Training, Placement(10)

The objective of the placement cell is to mould the students to cope with the changing demands of the corporate world and place them in reputed companies based on the expected job profiles of each student

Placement Activities:

The Placement and Training cell monitors the employment opportunities, cater to enhance employability of students and arrange on and off campus interviews. Our Campus recruitment program starts right from the penultimate semester. It's a policy of the Placement Cell not to patronize companies bend on doing Education & Training activities to attract the students in the name of recruitment against payment

The placement cell does not encourage the students, those who are placed through campus selection in a company to attend the further campus interviews so as to provide a chance for other students to get placed. The students aspiring for higher studies are encouraged to undergo GATE/CAT exams.

Functioning of placement cell

National Institute of Technology, Srinagar (NIT Srinagar) lays emphasis on the placement of the students by training and preparing the students to face the real life situation after graduation. An exclusive Placement & Training cell under the guidance of an eminent professor collects the data of the graduating students and maintains a comprehensive database for ready reference.

The Institute provides an environment for comprehensive and harmonious development of the personality. We have regular communicative English Program incorporated in the curriculum. Further, resource persons and professionals from the field of communication and interpersonal skills are invited to equip our students with necessary soft skills required to face the interviews in today's competitive world. Such training exposure enhances the students' employability. Goal setting Time Management and Prioritization are the Key points that are implanted in the Young minds.

Institute also provide need-based programs on software's relevant to industry such as VLSI, Embedded Technology, Auto/Electrical CAD, Pro/E, JAVA, J2 EE, just to mention a few.

Placement Details

Academic Year	Branch	Batch Size	Placement	Higher Studies	Placement Percentage
CURRENT ACADEMIC YEAR (2017-18)	CS	59	41	-	69.49
	EC	73	32	-	43.83
	ME	76	27	-	35.52
	CIVIL	118	31	-	26.27
	IT	56	38	-	67.85
	CHEM	64	7	-	1.09
	METTA	65	14	-	21.53
	EEE	73	27	-	36.98
CURRENT ACADEMIC YEAR (2016-17)	CS	56	22	6	39.28
	EC	69	42	8	60.86
	ME	71	42	13	59.15
	CIVIL	101	4	2	3.9
	IT	46	22	0	47.82
	METTA	54	9	-	1.66
	CHEM	51	5	-	0.9
	EEE	60	22	4	36.66
CAYm1 (2015-16)	Avg. Placement 4.95 lpa				

Table B.9.5a

List of companies visited the campus

SL.NO	Name of Company
ACADEMIC YEAR (2017-18)	
1	Grey B
2	Tek Systems
3	Envestnet Yodlee
4	Wipro

5	Johnson Controls
6	Virtusa
7	Persistent Systems
8	IBM
9	L&T Infotech
10	Adverb
11	Resonance
12	Vedanta
13	Tata Motors
14	Cummins
15	Reliance JIO
16	L&T Construction
17	IOCL
18	Infosys
19	Blogvault
20	Adobe
21	Sheroes
22	Nucleus Software
23	LG soft
24	Rankwatch
25	Samsung R&D
26	ZS Associates
27	Tata Projects
28	Tata Power
29	KPIT
30	JCB
31	OIL India
32	Sagacious Research
33	Afcon Infrastructure
34	KEC
35	GAIL
36	HPCL
37	Idea Board

Table B.9.5b

Sl.No	Name of Company
Academic Year (2016-17)	
1	Vedanta
2	Bharat Aluminium Company
3	Grey-B
4	Afcons Infrastructure
5	Career Point
6	Avanti Private Limited
7	Raspitech
8	Allen
9	Sagacious Research
10	IOCL
11	Accenture
12	Infosys
13	Capgemini
14	Intellect Design
15	Sapient
16	Sprinklr
17	Maruti Suzuki
18	HPCL
19	Tata Motors
20	Ashoka Leyland
21	Gravita India
22	SKF Bearings
23	Shaljon Technologies
24	Intellect Design Arena Pvt Ltd
25	CDK Global
26	TEK Systems
27	Indian Seamless Metal Tubes
28	Jindal Steel
29	Gravita
30	PGCIL

Sl.No	Name of Company
Academic Year (2015-16)	
1	Alstom Transport
2	BCloud
3	FCS Teksystem
4	Grey B
5	Infogain
6	Infosys
7	Intellect Design Arena Pvt Ltd
8	Maruti Suzuki
9	MU Sigma
10	SKF Bearings
11	TCS
12	Tata Motors
13	Valforma
14	Yodlee
15	Samsung R&D
16	Sterlite
17	SAP Labs
18	Blue Star
19	Sagacious Research
20	Aakash Institute
21	DESL
22	ABB
23	Fiat Chrysler Automobiles
24	Pompeii Connect
25	Power Grid Corp.

Table B.9.5c

Activities from Student Welfare Cell for Career Guidance and Counselling

Career Guidance and Counselling is a comprehensive, developmental program designed to assist students in making and implementing informed educational and occupational choices. Career guidance and counselling program develops an individual's competencies in self-knowledge, educational and occupational exploration, and career planning.

Objectives

- To create awareness among the students for their future profession.
- To provide guidance to the students on various options available in the courses of their study
- To provide information to the students on the scope and relevance of any area irrespective of their field of interest.
- To provide guidance to develop positive attitude and behaviour in order to meet challenges of life to make it healthier.

Resource persons from different fields deliver talks about career options to students and teachers and staff of the Institute through guidance and career counselling seminars and workshops.

Activities of student Welfare Cell include Career Guidance and Counselling. The faculty also participates in personal counselling:

- To help students to chalk out academic roadmaps for themselves.
- To enable students to integrate themselves with the milieu.
- To acquaint them with various career options through seminars.
- To address problems related to stress, anxiety, examination phobia, peer pressure and adjustment to changed environment.
- To help students, Periodic reports are shared with parents whenever necessary. Aptitude tests have been carried out to see the inclination of the students. Students were made to undergo this test and they had much to avail themselves of it .

Effective services for career guidance including counselling for higher studies

Training details for students

Sl. No	Course/Activity	Status of the Course	Source of the Resources
1	Technical English & Communication skills	Curricular	In house
2	Professional Ethics	Curricular	In house

3	Aptitude	Co-academic	Both internal and external
4	Campus Recruitment Training	Co-academic	Both internal and external
5	Workshops	Co-academic	External
6	Event specific Programmes like GATE coaching	Co-academic	In house

Table B.9.5d

Provisions for improving Placements:

- Offering more elective subjects in order to offer a wider perspective for the students to choose from. On other hand, the students would get an opportunity to have exposure to the emerging technologies.
- Some of the students may even come to a clear understanding that such sub- areas exist in their area of activity such they would visualize their career in those areas.
- Projects are introduced in order encourage positive compartmentalization of learning and to offer simulated industrial operations.
- In addition to the above, teachers offer counselling individually or in small groups.
- Separate Placement & Training Cell is maintained.

Coordinators from various streams are appointed to assist and supervise relations with various industries.

Industrial Training

The fundamental objective of Industrial Training is to prepare students for future employment in their chosen engineering discipline. Industrial Training enhances the academic material studied at University by allowing students to practice what they have learned and to develop key professional attributes. Industrial training should provide an opportunity for students to:

- Experience the discipline of working in a professional engineering organization
- Develop understanding of the functioning and organization of business
- Interact with other professional and non-professional groups
- Apply engineering methods such as design and problem-solving
- Develop technical, interpersonal and communication skills; both oral and written Industrial training also gives employers an opportunity to assess future employees. Demonstrated commitment and ability to take responsibility, make sound decisions, and apply technical skills will be highly regarded. Industrial training gives students an opportunity to evaluate future employers as well as enabling informed decisions about the discipline and career paths to follow.

Training & Placement Officer

Prof. A.A. Mir

Professor I/C

Training & Placement Department

NIT Srinagar

Mobile: 9419091127

Email-id: aamir@nitsri.ac.in;

placements@nitsri.ac.in

Infrastructure and Facilities available in the placement cell:

- Number of interview rooms: 2
- Number of GD rooms: 1
- Number of chambers for HR personnel: 2
- Number of guest rooms for HR personnel: 6

Members of Placement Cell:

- Full-time Officers: 1 (1 TPO)
- Full-time Trainers: 2 (Soft skills & Personality Development)
- Student Volunteers attached to placement cell: 32

9.6 Entrepreneurship Cell(5)

Innovation and Entrepreneurship Development Cell

An Entrepreneurship Cell is headed by Prof. Saad Parvez. Its duty is to "develop institutional mechanism to create entrepreneurial culture in academic institutions to foster growth of innovation and entrepreneurship amongst the faculty and students.

Benefits

1. Become a leader- manage a student organization, illustrate abilities in planning, logistics, marketing, and advertising, create visibility for future employers.
2. Build a network- make contacts with entrepreneurs, professionals and academics who can help with recommendations, network and start a venture with peers.
3. Initiate innovative activities- invite business leaders to campus, plan new and exciting events for students to kick-start learning about new industries and different aspects of business planning.

Functions of the Entrepreneurship Cell:

- To inculcate a culture of innovation driven entrepreneurship through student projects.
- To organize Entrepreneurship Awareness Camps, Entrepreneurship Development Programmes, Faculty Development Programmes and Skill Development Programmes in the Institute/institution.
- To arrange interaction with entrepreneurs and create a mentorship scheme for student entrepreneurs.
- To facilitate creation of entrepreneur's club in each department to foster culture of entrepreneurship amongst students
- To disseminate knowledge and insights in entrepreneurial theory and practice through lectures activities and workshops.
- Build knowledge and skills to translate ideas into opportunities while they are on campus.
- Be motivated to start their own companies after graduation or after a few years of gaining industry experience.
- Be inspired to consider entrepreneurship as a possible career option

Innovation, Incubation and Entrepreneurship Development Centre Year 2017

List of activities undertaken by IIED centre during year 2017

Sl. No.	Date	Name of Event	Organized By	No. of Attendee	Co-ordinator/s faculty/students
01	April 3, 2017	Seminar on “Emerging trends in Android based mobile app”	Mr. Abhishek Kumar, Senior Corporate Technical Trainer (IBM Experts)	118	HEAD, IIED Centre
02	April 15-16, 2017	Two day’s workshop on Robotics	Utkranti, eDC Team, IIT Delhi	78	HEAD, IIED Centre
03	April 29-30, 2017	Two day’s Workshop on “PLC & SCADA”	CETPA Infotech. Pvt. Ltd.	63	Vaibhav Mishra Shrishti Hooda Suryansh Mishra

04	May 6-7, 2017	Two day's workshop cum National Championship on Internet of things	TechieNest Pvt. Ltd. And IIT Hyderabad	82	HEAD, IIED Centre
05	June 10, 2017	Interaction session with Kashmir's Entrepreneurs	Founder of KashBook, Co-Founder of Captivating Kashmir and INSPIRE award winner Zufa Iqbal	97	Rahul Kumar Shriyansh
06	Sep 6-7, 2017	"Youth Entrepreneurship in conflict areas" Symposium in Srinagar, J&K	CHINAR International in association with South Asia Network of Impact Masters and IIED Centre, NIT Srinagar	27	HEAD, IIED Centre
07	Oct 2, 2017 (MEGA EVENT)	IDEA CHALLENGE 2017 – "The Future World"	IIED Centre	1000+	IIEDC Team 9with prize money worth 30,000 distributed to winners)
08	Oct 2, 2017	Swachh Bharat Abhiyan	Srinagar Municipal Corporation	43	Shriyansh
09	Oct 2, 2017	Orientation Session of Batch 2016 & Batch 2017	IIED Centre	600+	IIEDC Team
10	Oct 5, 2017	Orientation program of "The Better You"	STARTUP KASHMIR	134	Abhishek Gourav Rahul Kumar Shriyansh
11	Oct 29, 2017	One day seminar on "Importance of international certification in Design,	CETPA Infotech. Pvt. Ltd.	540+	Shriyansh Rahul Kumar

		Automation and IT industries”			
12	Nov 2, 2017	Interaction Session with “Prof. Anil Kumar Gupta”, Founder of Honey Bee Network.	Central University of Kashmir	18	Rahul Kumar
13	Nov 9, 2017	Catalysing a cultural shift in youth entrepreneurship	EDP Cell on National Entrepreneurship Day	88	Nishant Sharma Manik Lamba

Table B.9.6

14. Apart from the above the IIED centre is working for establishment of state of the art Incubation centre for which DPR is being prepared with help of consultants.

15. Successfully handed over an innovative project titled as "Value addition in a room warmer, Bukhari" to NIF which was commercialised and handed over to a local firm for production.

16. Presently the centre is working to design and develop a walnut hulling machine, another NIF project.

THE CONCEPT OF IDEA BANK

Given by IIED Centre and is being implemented in different schools and institutions of the valley

5-3-2016

A bank is a facility where people invest their money to get higher value of their investments. The banking process is interrelated to the general economic system of a nation. Billions of people invest in different schemes to obtain benefit in different ways. Innovation involves improving the way of producing goods or services. Often it involves creating better or efficient technology or a value addition in a product, process, procedure or method. Innovation may be the result of Research & Development. But innovation could also be a ‘brainwave’ – A Eureka moment where someone has a good idea to improve working practices. Idea generation is the creative process used in order to figure out solutions to difficult challenges. Idea generation is a natural process which flashes in the mind and is generated through some mechanism. This mechanism could be a long continuous effort towards solving a problem. It could also be a whim, contemplation, intuition, or a perception which may arise because of knowledge, experience or a hunch. Every individual in his life generate ideas to resolve a problem, or feels that his idea if applied or processed might provide a solution, when known solutions are unavailable. His idea may or may not mature or may vanish from his mind. Converting ideas into accomplishments is a tedious process and requires application of certain resources, knowledge and processes. There are many situations in which some brilliant idea which might have made a difference, fade and vanish away because of lack of right approach in protecting and storing it. Idea bank is a concept which provides a platform where ideas of individuals are deposited and stored. The processing of these

ideas can be carried in incubation centres nearest to such banks leading to its logical conclusion. It is a structured methodology which can help individuals to process their idea to obtain solution for their problem. The banks initially collect ideas. These ideas are taken to second phase where they are further filtered and relevant ideas are allowed to enter the next stage. In the third stage, the relevant experts process these ideas and add value to it. This stage may define the material requirements, technology to be used, bill of materials, drawing, processes, methods etc., whatever is relevant for the idea. This is the major stage which enables to develop a prototype or defines a new process or method.

Idea banks need to be established in:

1. Primary and secondary level Schools.
2. All other educational institutions including Institutes, universities, technical and non-technical institutions, training centres industries, service and manufacturing units.

Idea banks need to coordinate at different levels to share and develop ideas, mechanism of which could be developed.

Invitation Lecture By An Eminent Professor

Date: **20-05-2016**

Professor K.L. Chopra, eminent Scientist, academician and ex- Director IIT Kharagpur, visited NIT Srinagar and delivered an expert lecture on the topic, "**NURTURING INNOVATION & ENTREPRENEURSHIP IN ACADEMIA**" on **24th May, 2016 (Tuesday) at 4.00 p.m.**, in the institutes HI-TECH room.

The lecture was very informative and thought provoking and was appreciated by one and all.

9.7 Co-curricular and Extra-curricular Activities(10)

(The institution may specify the Co-curricular and extra-curricular activities) (Quantify activities such as NCC, NSS etc.)

- Students are encouraged to participate in extracurricular activities.
- Music and Hobbies clubs are functioning very effectively.
- All the departments have their own technical societies which organise technical seminars, quizzes and other competitions in the departments to give a thrust to the development of academic potential of the students.
- NSS units have also been rendering valuable service by inculcating the habits of social and national responsibilities amongst the students.

- A technical fest called 'Techvaganza' is conducted every year.
- Our students participate in the cultural activities outside the campus also.

9.7.1 Sports and games facilities

Adequate provisions for extra-curricular activities are available in the institute. At present, facilities are available for Badminton, Volley-Ball, Football, Cricket, Basketball, Kho-Kho, Kabaddi, Athletics and other indoor games.

Details of faculty/ staff in charge for sports and games

Name	Designation	Department
Dr. S.K. Bukhari	Associate Dean	Physical Education
Ms. K. A. Mir	SAS Officer	Physical Education

Table B.9.7.1a

Faculty profile for Physical Education

1. Name: Dr. S.K. Bukhari

Email: kaiser@gmail.com

2. Name: Ms. K. A. Mir

E-mail: kowsaralimir@gmail.com

Designation: SAS Officer

Inter-Semester Sports Meet: The Institute organizes the Bi-annual sports meet in every academic year, known as Inter-Semester Sports Meet. Inter-Semester Sports Meet provides an excellent



platform for the students to exhibit their sports and game capabilities. Various events like Badminton, Volley-Ball, Football, Cricket, Basketball, Kho-Kho, Kabaddi, Chess, Carom, Hockey,

Table tennis and Athletics 100 meter, 200 meter 400 meter, 800 meter race, high jump, long jump, shot put, etc. are conducted.

Figure B.9.7.1

Sports and games facilities

Sl.No	Name of the Event	Area	Mode of Game
1	Table Tennis	8 standard tables	Indoor
2	Basketball	38 m x 18m(2)	Outdoor
3	Volley ball	40 m x 25 m (3)	Outdoor
4	Carom	game boards (10)	Indoor
5	Badminton courts	7 courts	Outdoor
6	Football	110 m x 70 m	Outdoor
7	Chess	game boards (20)	Indoor
8	Gymnasium (Boys)	25 m x 15 m (Fitness Equipments)	Indoor
9	Gymnasium (Girls)	13 m x 7 m	Indoor
10	Cricket	Hard Pitch	Outdoor

Table B.9.7.1b

Sports Events Conducted/ participated/ in and outside NIT Srinagar from 1st January 2015 upto 31st April 2018

S.No.	Sports Event/s	Place and month where played/ conducted	Prizes/ Awards/ Positions
1.	All India Inter NIT Athletics (Boys/Girls) at NIT Rourkela	NIT Rourkela January 2015	Participation
2.	All India Inter NIT Cricket (Boys) at NIT Allahabad	NIT Allahabad February 2015	Participation
3.	All India Inter NIT Football (Boys) at NIT Warangal	NIT Warangal February 2015	Participation
4.	Inter-Semester Tournament in all Games (Boys & Girls) Spring	NIT Srinagar (April 2015)	All Semesters
5.	International Yoga Day (Boys and Girls)	NIT Srinagar (June 2015)	All students of the Institute

6.	Tri-series of Cosco cricket tournament with SSM Collage Srinagar	SSM Institute July	Won by NIT Srinagar
7.	Tri-series of Basketball tournament with SSM Collage Srinagar	SSM Institute August	Runner up
8.	State Football Tournament (Boys)	SRTC Srinagar (June 2015)	4 th place
9.	Inter-Semester Tournament in all Games (Boys & Girls) Autumn	NIT Srinagar (September 2015)	All Semesters
10.	All India Inter NIT Kho-Kho and Kabaddi (Boys/Girls) at NIT Rourkela	NIT Rourkela January 2016	Participation
11.	All India Inter NIT Athletic (Boys/Girls) at NIT Jaipur	NIT Jaipur February 2016	2 nd in long jump and 3 rd in triple jump
12.	All India Inter NIT Cricket (Boys) at NIT Calicut	NIT Calicut March 2016	Participation
13.	Inter-Semester Tournament in all Games (Boys & Girls) Spring	NIT Srinagar (September 2016)	
14.	Inter NIT/ IIT Tournament Hockey (Boys)	IIT Roorkee (April 2016)	3 rd place
15.	Open Tournament in all Games (Boys & Girls)	NIT Srinagar (April 2016)	
16.	State Football Tournament (Boys)	SRTC Srinagar (May 2016)	3 rd place
17.	Tri-series of cricket tournament with GMC Srinagar	NIT Srinagar 2016	Won by NIT Srinagar
18.	Tri-series of cricket T20 tournament with SSM Collage Srinagar	NIT Srinagar 2016	Won by NIT Srinagar
19.	Cricket Match between Alumni and Faculty of the Institute on the Eve of Alumni Day	NIT Srinagar (May 2016)	Won by Alumni
20.	Cricket Tournament with Government Dental Institute Srinagar	NIT Srinagar (June 2016)	Won by NIT Srinagar
21.	Karwan-i-Aman Cricket Tournament conducted by Sashashtra Seema Bal (SSB 47 th Batallion)	NIT Srinagar (June 2016)	Runner up
22.	International Yoga Day	NIT Srinagar	Participation by all

	(Boys and Girls)	(June 2016)	students
23.	National Workshop on Physical Education for all NITs	NIT Transit House Delhi (August 2016)	Sports Fraternity from all NITs participated
24.	Rashtriya Ekta Saptah	NIT Srinagar (November 2016)	All the students of NIT Participated
25.	Observance of Fundamental Duties Day	NIT Srinagar (November 2016)	All the students of NIT Participated
26.	Open State Basketball Championship	Indoor Games Stadium (November – December 2016)	Runner up
27.	Inter-Semester Tournament in all Games (Boys & Girls)Autumn	NIT Srinagar (April 2016)	All the students of NIT Participated
28.	All India Inter NIT Cricket(Boys)/ Swimming (Boys & Girls) Tournaments	NIT Rourkela (January 2017)	5 th place in Cricket
29.	Coaching Camp for Boys & Girls in Chess & Table Tennis	NIT Srinagar (March 2017)	All the students of NIT Participated
30.	All India Inter NIT Table tennis(Boys/Girls) and Chess (Boys & Girls) Tournaments at NIT Srinagar	NIT Srinagar (April 2017)	Winner T.T (boys) Chess Runner up (girls) And T.T (girls) 2 nd runner up
31.	IST State Championship of Cricket (Boys), Football (Boys) and Basketball (Boys).	Jammu University (April 2017)	Runner up Basketball 4 th place in cricket
32.	Summer State Basketball League.	Indoor Stadium 2017	Runner up
33.	Inter-Semester Spring Tournament in all Games (Boys & Girls)	NIT Srinagar (May 2017)	All the students of NIT Participated
34.	Yoga day	NIT Srinagar (June 2017)	All the students of NIT Participated
35.	Open Badminton Tournament (Boys)	NIT Srinagar (August-September 2017)	All the students of NIT Participated
36.	Inter-Semester Autumn Tournament in all Games (Boys & Girls)	NIT Srinagar (September 2017)	All the students of NIT Participated
37.	Club Activities	NIT Srinagar (September 2017)	All the students of NIT Participated
38.	Rashtriya Ekta Diwas	NIT Srinagar (October 2017)	All the students of NIT Participated

39.	Open (Tennis Ball Cricket/Cosco Cricket Tournament	NIT Srinagar (October 2017)	All the students of NIT Participated
40.	Cricket Tournament with Government Dental Institute Srinagar	NIT Srinagar (November 2017)	Winner
41.	All India Inter NIT Kabaddi (Boys)	NIT Surathkal (January 2018)	Participation
42.	All India Inter NIT Badminton (Boys/Girls) and Basketball (Boys) Tournaments at NIT Warangal	NIT Warangal (January 2018)	4 th place in basketball 5 th place in badminton
43.	2nd State Championship of Cricket (Boys), Football (Boys) Badminton (Boys) and Table tennis (Boys).	Jammu University (April 2018)	Winner in Table tennis 3 rd place in badminton 3 rd place in cricket

Table B.9.7.1c

Additional Student Activities Held During the Past Three Years

S. No.	Particulars	Year
01.	Debate on the verdict of Salman Khan's hit and run case	2015-2016
02.	Vigilance Awareness Week	
03.	Kavi Samelan	
04.	Traffic Management	
05.	Haemoglobin Derive for females	
06.	Techvaganza	
07.	Mental Health Day	
08.	Yoga Day	
09.	Cleanliness Drive (Swachh Bharat Abhiyan)	2015-2016, 2016-2017, 2017-2018
10.	Alumni Meet	
11.	Fresher's Day/Orientation Programme	
12.	Farewell	
13.	Induction Programme	2017-2018
14.	Stress Management	2017-2018
15.	Passport Mela	2017-2018
16.	Musical Concert (Ustad Kamal Sabri)	2017-2018

Table B.9.7.1d

CRITERION 10	Faculty/non-teaching Recruitment Rules	Max. Marks: 50 Claimed: 50
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10.1 Organization, Governance and Transparency (55)

10.1.1

A. Availability of the Vision & Vision statement of the Institute:

- **VISION OF NIT SRINAGAR**

To establish a unique identity of a pioneer technical Institute for NIT Srinagar by developing a high quality technical manpower and technological resources that aim at economic and social development of the nation as a whole and the region in particular keeping in view global challenges.

- **MISSION OF NIT SRINAGAR**

- (1) The broad mission of NIT Srinagar is to create a strong and transformative technical educational environment in which fresh ideas, moral principles, research and excellence nurture with international standards.
- (2) Technically educated and broadly talented engineers, future innovators and entrepreneurs, graduate with understanding the needs and the problems of the industry, the society, the state, and the nation.
- (3) We promise to inculcate the highest degree of confidence, professionalism, academic excellence and engineering ethics in budding engineers.

B. Appropriateness / Relevance of the Statements

The National Institute of Technology Srinagar has been established with a prime motive to produce skilled human resource who will act as nation builders. In NIT Srinagar students from all over the country take admissions and leave the institution as technically educated and talented manpower and get absorbed in different fields throughout the world. The Vision and Mission of the Institute is fully in consonance to work and in imparting the education to the students.

10.1.2 Availability of Institutional Strategic Plan and its Effective Implementation and Monitoring (25)

The institute has prepared Vision Document for 15 years upto 2025. The said document is placed as **Annexure-1**.

10.1.3 Governing body, administrative setup, functions of various bodies, service rules procedures, recruitment and promotional policies (10)

A. Board of Governors:

<i>Chairman</i>	Nominated under Section 17(15) of the First Statutes of NIT Act 2007	Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<i>Ex-Officio</i>	Nomination under Section 11 of NIT Act, 2007 (29 of 2007) Clause (b)	Prof. Rakesh Sehgal, Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<i>Two persons not below the rank of the Joint Secretary to the Government of India to be nominated by the Central Government from amongst persons dealing with technical education and finance</i>	(c)	Joint Secretary (NITs & DL), Ministry of Human Resource Development, Department of Secondary & Higher Education, Government of India, New Delhi
	(c)	Smt. Darshana Momaya Dabral, Joint Secretary & FA, Ministry of Human Resource Development, Department of Secondary & Higher, Government of India, New Delhi.
<i>Two persons to be nominated by the Government of the State in which the Institute is situated, from amongst persons, who, in the opinion of that Government, are technologists or industrialists of repute</i>	(d)	Commissioner Secretary, Higher & Technical Education Dept., Government of Jammu and Kashmir, Civil Secretariat, Srinagar / Jammu.
	(d)	Mr. Sheikh Zubair Aslam, Hassan Sons Group, Srinagar Kashmir
<i>Two persons, at least one of whom shall be a woman, having special knowledge or practical experience in respect of education, engineering or science to be nominated by the Council</i>	(e)	Dr. Prema Ramchandran, Director, Nutrition Foundation of India, Delhi
	(e)	Awaited
<i>One Professor and one Assistant Professor or a Lecturer of the Institute to be nominated by the Senate</i>	(f)	Prof. Rajinder Ambardar, Metallurgical & Materials Engineering Department, National Institute of Technology Srinagar.
	(f)	Dr. Mohammad Hanief, Assistant Professor, Mechanical Engineering Department, NIT Srinagar
<i>Member-Secretary</i>	Section 18 Clause (2)	Dr. Nisar Ahmad Mir, Registrar, NIT, Srinagar.

Table B.10.1.3a

Finance Committee:

<i>Chairman</i>		Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<i>Members:</i> Two persons nominated by the Central Government	1	Mr. S. P. Goyal, Joint Secretary (NITs & DL), Ministry of Human Resource Development, Department of Secondary & Higher Education, Government of India, New Delhi
	2	Smt. Darshana Momaya Dabral, Joint Secretary & FA, Ministry of Human Resource Development, Department of Secondary & Higher, Government of India, New Delhi.
Two persons nominated by the BOG from amongst its members	1	Prof. Rajinder Ambardar, Metallurgical & Materials Engineering Department, National Institute of Technology Srinagar.
	2	--
Director (Ex-officio)		Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
Member Secretary (Ex-officio)		Dr. Nisar Ahmad Mir, Registrar,NIT, Srinagar.

Table B.10.1.3b

Senate:

<i>Chairman</i>		Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
Three persons, one of whom shall be a women, not being employees of the Institute to be nominated by chairperson in the consultation with the Director, from amongst educationists of repute, one each from the field of science, engineering and humanities	1	FILED OF HUMANITIES: Prof. Mehraj-ud-Din, Vice-Chancellor, Central University of Kashmir, Srinagar (J&K)

	2	FIELD OF ENGINEERING: Prof. A. K. Jain, Professor, Civil Engineering, Indian Institute of Technology, Hauz Khas, New Delhi
	3	FIELD OF SCIENCE: Prof. Azra Nahid Kamili, Dean Biological Sciences & HOD, Environmental Sciences, University of Kashmir
		Mr. Rajesh Uppal, Executive Director IT & CIO, Information Technology Division, Maruti Suzuki India Ltd., Palam Gurgaon Road, Gurgaon-122015 (Haryana) E mail: Rajesh.Uppal@maruti.co.in
<i>The Professors appointed or recognized as such by the Institute for the purpose of imparting instructions in the Institute.</i>	1	All Professors
Such other members of the staff as may be laid down in the Statutes	1	All Dean, HODs, Associate Deans, Controller of Examination, Coordinator 1 st & 2 nd Semester, Chairman Library Committee, Librarian and DPE.
Secretary		Dr. Nisar Ahmad Mir, Registrar, NIT, Srinagar

Table B.10.1.3c

Building and Works Committee

Chairman		Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<i>Members:</i> Nominated by MHRD and IFD New Delhi	1	Director OR Deputy Secretary (NITs), MHRD, Department of Secondary & Higher Education, Government of India, New Delhi – 110 001.

	2	Representative of * Integrated Finance Division (IFD)
One person nominated by the Board of Governors		Syed Shuja Hussain, Former Chief Engineer (Civil) PWD J&K Government R/O:Al-Manzir, Rajbagh, Srinagar
Dean, Planning & Development		Prof. Javed Ahmad Bhat, Civil Engineering Department, NIT Srinagar
Nominee of the CPWD / State PWD	1 2 3 4 5	Mr. N. K. Bansal Superintendent Engineer (Civil), CPWD, Chandigarh. Dr. B. A. Mir, Associate Dean, P&D, NIT Srinagar Shri Rajiv Sao, Superintendent Engineer, CPWD Chandigarh Executive Engineer (Civil), CPWD, Srinagar. Er. Muneeb Ahmad, Executive Engineer, Electric Division 4th Srinagar.
Secretary		Dr. Nisar Ahmad Mir, Registrar, NIT, Srinagar.

Table B.10.1.3d

Function and Responsibilities of key Bodies:

The functions of key bodies are depicted in table below:

Bodies	Functions and Responsibilities
Board of Governors	<ul style="list-style-type: none"> • the Board shall be responsible for the general superintendence, direction and control of the affairs of the Institute • take decision on questions of policy relating to the administration and working of the Institute • institute courses of study at the Institute • make statutes

	<ul style="list-style-type: none"> • institute and appoint persons to academic as well as other posts in the Institute • consider and modify or cancel ordinances • consider and pass resolutions on the annual report, the annual accounts and the budget estimates of the Institute for the next financial year as it thinks fit and submit them to the Council together with a statement of its development plans • exercise such other powers and perform such other duties as may be conferred or imposed upon it by this act or the statutes • the Board shall have the power to appoint such committees, as it considers necessary for the exercise of its powers and the performance of its duties under this Act.
Finance Committee	<ul style="list-style-type: none"> • examine and scrutinize the annual budget of the Institute prepared by the Director and make recommendations to the Board and • give its views and make its recommendations on any financial proposals or issues affecting the Institute to the Board either on the initiative of the Board or of the Director or on its own motion
Building and Works Committee	<ul style="list-style-type: none"> • the Building and Works Committee shall under the directions of the Board shall carry on construction of all major works after the necessary administrative approval and expenditure sanction from the Board. • have the power to give the necessary administrative approval and expenditure sanction for minor works and works pertaining to repair and maintenance, within the approved budgetary provision of the Institute and the Board will define the minor work and minor repair and maintenance in terms of quantum or expenditure • cause to prepare estimates of cost of buildings and other capital works, minor works, repairs, maintenance and the like. the Building and Works Committee shall approve the cost estimates for minor works, minor repairs and maintenance • be responsible for making technical scrutiny of the design, estimates and specifications of the material as may be considered necessary • be responsible for enlistment of suitable contractors and acceptance of tenders and shall have the power to give directions for departmental works where necessary duly recommended by the Dean (P&D) of

	<p>the Institute</p> <ul style="list-style-type: none"> • have the power to settle rates not covered by tender and settle claims and disputes with contractors • in the opinion of the Chairman of the Building and Works Committee, any emergency has arisen which requires immediate action to be taken; he shall take such action and report the same to the Building and Works Committee and the Board at their next meeting. • Shall also perform such function and exercise such powers as may be entrusted by the board from time to time.
Senate	<ul style="list-style-type: none"> • frame and revise curricula and syllabi for the courses of studies for the various Departments and Centres • make arrangements for the conduct of examinations, appointment of examiners, moderators, tabulators and other matters relating to the examinations • declare the results of the examinations or to appoint committees or Officers to do so and to make recommendations to the Board regarding conferment or grant of degrees, diplomas and other academic distinctions or titles • appoint Advisory Committees or Expert Committees or both for the Departments or Centres of the Institute to make recommendations on academic matters connected with the working of the Departments or Centres • appoint Committees from amongst the members of the Senate, other Teachers of the Institute an experts from outside to advise on such specific and important academic matters as may be referred to any such committee by the Senate • consider the recommendations of the Advisory Committees attached to various Departments or Centres and that of Expert and other Committees and take such action (including the making of recommendations to the Board) as warranted by each case • make periodical review of the activities of the Departments or Centres and take appropriate action (including the making of recommendations to the Board) • supervise the working of the Library of the Institute • promote research and academic development or

	<p>activity within the Institute and seek reports on such research or academic development or activity from the persons engaged therein</p> <ul style="list-style-type: none"> • provide for the inspection of the class rooms, laboratories, library and the Residential Hostels • plan co-curricular activities of the students of the Institute • award stipends, scholarships, medals and prizes and make other awards in accordance with such conditions as may be attached to the awards • make recommendations to the Board to disseminate knowledge through distance learning mode to various parts of the State or country or abroad and in the cases of signing of agreement with the foreign agency, agreement may be signed with approval of the ministry • make recommendations to the Board to disseminate knowledge through distance learning mode to various parts of the State or country or abroad and • Invite up to two student representatives during discussion of general nature not involving policy or disciplinary matter in the Senate meetings.
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Table B.10.1.3e

Frequency, participations details of external members and attendance of Board of Governors, Finance Committee, Building and Works Committee and Senate:

Sl. No.	Date of meetings	Academic Year	No. of participants (external members)	Total No. of participants
Board of Governors:				
1	14-03-2018	2017-18	02	06
2	21-11-2017	2017-18	03	07
3	19-06-2017	2017-18	03	07
4	13-10-2016	2016-17	03	08
5	04-10-2016	2016-17	05	10
6	03-06-2016	2016-17	01	06

7	11-04-2016	2016-17	03	08
Finance Committee:				
1	14-03-2018	2017-18	02	05
2	21-11-2017	2017-18	02	05
3	04-10-2016	2016-17	02	05
4	11-04-2016	2016-17	03	07
Building and Works Committee:				
1	01-11-2017	2017-18	05	10
2	03-10-2016	2016-17	04	07
3	01-09-2016	2016-17	04	08
4	22-04-2016	2016-17	04	08
Senate:				
1	27-12-2017	2017-18	01	42
2	31-12-2016	2016-17	03	42
3	08-04-2016	2016-17	01	42

Table B.10.1.f

B.The published service rules, policies and procedures with year of publication

Service Rules

The Institute follows the Central Government Service Rules approved by the Ministry of Human Resource Development for both Faculty and Non faculty and as amended from time to time.

The Copies of Service Rules **are enclosed.**

- I. Faculty Recruitment Rules. – **Annexure-2**
- II. Non-Teaching Recruitment Rules - **Annexure-3**

C. Minutes of the meetings and action taken reports:

Minutes of the Meetings:

Minutes of the 96th meeting of Board of Governors National Institute of Technology Srinagar, Hazratbal, J&K

Held on March 14, 2018 at 12.00 p.m. at NIT Transit House, Safdarjung Enclave,
New Delhi.

BOG/2018/96/01	To confirm the minutes of the 95 th Board of Governors Meeting of the Institute held on 21 st November, 2017 in NIT Transit House, at Safdarjung Enclave, New Delhi.
Resolution No. 01/96	Confirmed.
BOG/2018/96/02	To record action taken report on the decisions of 95 th Board of Governors Meeting held on 21-11-2017 in the NIT Transit House, Safdarjung Enclave, New Delhi.
Resolution No. 02/96	Report recorded. However in respect of resolution No. 12/95 & 13/95, it was desired that the MHRD may expedite the matter.
BOG/2018/96/03	To ratify the action taken by the Chairman BOG in having approved the foreign visits of faculty members of the Institute under CPDA.
Resolution No. 03/96	Ratified.
BOG/2018/96/04	To ratify the action taken by the Director in the capacity of Chairman BOG for implementation of 7 th Pay Commission in favour of Non-Faculty positions.
Resolution No. 04/96	Ratified.
BOG/2018/96/05	To ratify the action taken by Chairman BOG for renewing the recognition of Alumni Association NIT, Srinagar.
Resolution No. 05/96	Ratified.
BOG/2018/96/06	To ratify the action taken by Chairman BOG for reorganization of Alumni Association NIT, Srinagar (Delhi Chapter).
Resolution No. 06/96	Ratified.
BOG/2018/96/07	To ratify the action taken by Chairman BOG for signing MoU with IIT

	Jammu and IIT Delhi by NIT Srinagar.
Resolution No. 07/96	Ratified.
BOG/2018/96/08	To ratify the action taken by the Director in capacity of Chairman BOG in having approved the engagement of Temporary Faculty for the Academic Spring Session 2018.
Resolution No. 08/96	Ratified. Further, BOG ordered that Institute should fill up permanent faculty at the earliest and temporary faculty together with permanent faculty should not exceed the sanctioned strength.
BOG/2018/96/09	To consider signing of MOU between NIT Srinagar and Department of Higher Education, MHRD, New Delhi, in pursuance of the rule 229 (xi) of the GFR, 2017, and as per the Instruction of MHRD.
Resolution No. 09/96	BOG considered signing of MOU between NIT Srinagar and Department of Higher Education, MHRD, New Delhi.
BOG/2018/96/10	To authorize the Chairman BOG/Director of NIT, Srinagar to grant approvals for new development projects and purchase of laboratory equipments under Financing from Higher Education Funding Agency (HEFA).
Resolution No. 10/96	BOG considered the recommendations of the FC that the ongoing development projects which are under completion be now projected under HEFA for meeting out the deficient funds. A DPR of these projects be prepared and submitted to MHRD for approval before the Institute applies for loan under HEFA. Further, FC was appraised that such projects stand considered and approved in previous FC and BOG meetings. No new projects are taken up without the prior approval of the competent authority.
BOG/2018/96/11	To consider the remuneration / sitting fee in favour of all the members of FC/BWC/BOG for attending the meetings.
Resolution No. 11/96	BOG desired that this is already approved in the NIT ACT and the Institute should proceed accordingly.
BOG/2018/96/12	To consider the recommendation of Deans/HODs/in capping the expenditure limit for procurement of consumables, payment for testing the materials.

Resolution No. 12/96	<p>Matter considered. However, the expenditure is exclusively recommended for B. Tech. final year students for under taking the UG projects. Post Graduate projects and Ph.D. research related expenditure is also allowed subject to the following ceiling:</p> <table border="1"> <thead> <tr> <th>S.No</th> <th>Classifications of Students</th> <th>Amount limit</th> </tr> </thead> <tbody> <tr> <td>01.</td> <td>Under Graduate Students</td> <td>Rs.3000/- Per student. (one time final year students)</td> </tr> <tr> <td>02.</td> <td>Post Graduate Students</td> <td>Rs.10,000/- Per student. (one time)</td> </tr> <tr> <td>03.</td> <td>Ph.D Students</td> <td>Rs.20,000/- per Student per annum</td> </tr> </tbody> </table>	S.No	Classifications of Students	Amount limit	01.	Under Graduate Students	Rs.3000/- Per student. (one time final year students)	02.	Post Graduate Students	Rs.10,000/- Per student. (one time)	03.	Ph.D Students	Rs.20,000/- per Student per annum
S.No	Classifications of Students	Amount limit											
01.	Under Graduate Students	Rs.3000/- Per student. (one time final year students)											
02.	Post Graduate Students	Rs.10,000/- Per student. (one time)											
03.	Ph.D Students	Rs.20,000/- per Student per annum											
BOG/2018/96/13	To ratify the action taken by the Director in having advertised the vacant faculty positions on regular basis and to consider nomination of experts.												
Resolution No. 13/96	Ratified. Further Institute should fill up permanent faculty at the earliest possible												
BOG/2018/96/14	To consider the recommendations of Deans Committee for revision of consultancy rules of NIT, Srinagar.												
Resolution No. 14/96	Proposal to be placed in the next BOG meeting.												
BOG/2018/96/15	To consider the budget allocations of 2018-19 for NIT Srinagar.												
Resolution No. 15/96	BOG considered the recommendations of the FC that the ongoing development projects which are under completion be now projected under HEFA for deficient funds. A DPR of these projects be prepared and submitted to MHRD for approval before the Institute applies for loan under HEFA. Further, FC was appraised that such projects stand considered and approved in previous FC and BOG meetings. No new projects be taken up without the prior approval of the competent authority.												

Table B.10.1.3g

**Minutes of the 95th meeting of Board of Governors
National Institute of Technology Srinagar, Hazratbal, J&K**

held on November 21, 2017 at 02.00 p.m. at NIT Transit House, Safdarjung Enclave, New Delhi .

BOG-95/01	To confirm the minutes of the 94 th Board of Governors meeting of the Institute, held on June 19 th , 2017 in NIT Transit House, at Safdarjung Enclave, New Delhi.
Resolution No. 01/95	Minutes Confirmed with the change that the words, 'so called' be replaced by 'as reported' in the twelfth line of the Resolution No. 05/94 of BOG-94/05. This change was sought to be made by the Chairman in view of the sentiments expressed by the then I/C Director, Prof. A. R. Dar in one of his communications. While confirming the minutes, the BOG was informed that with regard to Resolution No. 04/94 of BOG-94/04 the issues have been, by and large, addressed by the Revised final modified RRs and the recommendations of the Anomaly Committee.
BOG-95/02	To record action taken report on the decisions of 93 rd Board of Governors meeting, held on October 04, 2016 and Adjourned meeting on October 13, 2016 at NIT Transit House, Safdarjung Enclave, New Delhi.
Resolution No. 02/95	Report Recorded.
BOG-95/03	To ratify the action taken by the Chairman, BOG in having approved enhancement of wages as per the Labour Schedule of Government of India in favour of Contractual workers engaged on compassionate basis.
Resolution No. 03/95	Ratified.
BOG-95/04	To ratify the action taken by the Chairman, BOG in having approved extension of cut-off date for usage of CPDA of Block 2014-17 by faculty members upto 31-03-2018.
Resolution No. 04/95	Ratified.
BOG-95/05	To consider the recommendations of the Central Purchase Committee with regard to releasing of remaining 30% payment in favour of M/S New Hi-Tech Enterprises, Srinagar against supply of gold medals for convocation 2013, held for the batches from 2004-2011.
Resolution No.	The BOG advised to refer the matter for legal opinion and take a decision

05/95	accordingly.
BOG-95/06	Adoption of communications of Vigilance Section of Department of Higher Education, MHRD, received by the Institute.
Resolution No. 06/95	Adopted
BOG-95/07	To consider the minutes of 8 th , 9 th and 10 th meetings of NIT Council held on 25-09-2014, 01-10-2015 and 26-05-2017 respectively.
Resolution No. 07/95	Report Recorded. The minutes of 10 th meeting of NIT Council was tabled in the meeting.
BOG-95/08	To adopt amendments in the First Statutes of the National Institutes of Technology (NITs).
Resolution No. 08/95	Adopted
BOG-95/09	To adopt the recommendations of the Anomaly Committee on new Recruitment Rules for Faculty in NITs and IEST regarding promotion of existing Assistant Professors to Associate Professors and mapping of existing Associate Professors with AGP of Rs.9,000/- to Rs. 9,500/- and Professors with AGP of Rs. 10,000/- to Rs.10,500/- communicated vide F. No. 33-9/2011-TS.III, dated 6 th October, 2017 and F. No. 33-9/2011-TS.III, dated 17 th November, 2017
Resolution No. 09/95	Adopted. The communication vide F.No. 33-9/2011-TS.III, dated 17 th November, 2017 was tabled in the meeting.
BOG-95/10	To consider the recommendations of the Finance Committee made at its meeting held on 04-10-2016 at 10.30 a.m. at NIT Transit House, Safdarjung Enclave, New Delhi.
Resolution No. 10/95	The recommendations of the Finance Committee are Approved
BOG-95/11	To approve the recommendations of the Selection Committee for appointment of Registrar for NIT Srinagar.
Resolution No. 11/95	The recommendations of the Selection Committee for selection of Registrar for NIT Srinagar are Accepted and Approved. The offer letter may first be issued to the incumbent at S.No. 1, i.e., Dr. Nisar Ahmad Mir, at the earliest as per the recommendations of the Selection Committee. The necessary contract may be signed with the selected candidate.

BOG-95/12	To consider the request of existing Assistant Professors for promotion as Associate Professors as and when they complete their Ph.D.
Resolution No. 12/95	It was noted that all the above faculty members have teaching experience of more than 09 years and are already pursuing their Ph.D. programme. The BOG was of the view that the faculty members are getting covered for upgradations under the recommendations of the Anomaly Committee on new Recruitment Rules communicated vide F. No. 33-9/2011-TS.III, dated 6 th October, 2017, as a one-time measure. However, it was decided to get a clarification from MHRD to this effect.
BOG-95/13	To approve for correcting and re-fixing the dates of eligibility of some of the Faculty members of NIT Srinagar.
Resolution No. 13/95	<p>It was decided to bring the new revealed facts before the Board of Governors for allowing to carry out necessary exercise for implementing the selection committee recommendations, under rules, with regard to all cases in order to give effect to upgradations from the dates of eligibility</p> <p>Accordingly the item was included in BOG agenda which was circulated to all members. A letter No. 16-7/2017-TS.III dated 20th November, 2017 was received from MHRD on Nov 21, 2017 in which it was suggested to drop the item from the BOG agenda and instead refer the same to MHRD for their concurrence as decided earlier. However, the item was taken up in the BOG to inform the BOG about the new information that had got revealed about the subject. The BOG discussed the issue and concluded that the matter, with complete details of new revelations, be sent to the MHRD for their concurrence with a request to convey the same within the shortest possible time. Quick resolution of these faculty grievances will help the institute to progress the recruitment of new faculty as well as mapping/upgradation of the existing faculty to avoid any further anomalies.</p> <p>Regarding other faculty grievances presented and discussed in 94th BOG meeting, seeking of concurrence from MHRD for their consequent redressed stands as decided by BOG for which concurrence as envisaged will also be sought.</p>
BOG-95/14	To consider the recommendations of the Finance Committee made at its meeting held on 21-11-2017 at 10.30 a.m. at NIT Transit House, Safderjung Enclave, New Delhi.
Resolution No. 14/95	Recommendations of the Finance Committee are Approved. Minutes of the FC are attached.

Table B.10.1.3h

Minutes of the 94th meeting of Board of Governors

National Institute of Technology Srinagar, Hazratbal, J&K

held on June 19, 2017 at 03.30 p.m. at NIT Transit House, Safdarjung Enclave, New Delhi .

BOG-94/01	To confirm the minutes of the 93 rd Board of Governors meeting held on 04.10.2016 and minutes of 93 rd BOG meeting (adjourned) held on 13.10.2016 of the Institute at NIT Transit House, Safdarjung Enclave, New Delhi.
Resolution No. 01/94	Minutes of the meeting of the 93 rd BOG held on 04.10.2016 were confirmed. The comments as received vide letter No. 16-7/2017-S.III dated: 19 th June, 2017 from MHRD with regard to adjourned meeting was discussed by the Board. Upon discussion the said minutes were agreed as confirmed with addition of the sentence that "The action with regard to points 2,3,5 and 6 as contained in Item No. 05/93 of BOG 93 rd dated: 13.10.2016 be initiated only after obtaining concurrence of MHRD".
BOG-94/02	To record report in having engaged the services of Assistant Solicitor General of India for J&K High Court at Srinagar as Institute Counsel for conducting the litigation.
Resolution No. 02/94	Report recorded.
BOG-94/03	To record report on the action taken by the Chairman, BOG in having approved engagement of temporary faculty for Autumn Session 2016 and session 2017 against the vacant faculty positions.
Resolution No. 03/94	Report recorded.
BOG-94/04	To consider modifications in the NIT Statutes.
Resolution No. 04/94	The BOG noted that the issues of the existing faculty have been, by and large, addressed by the Revised final modified RRs and the recommendations of the Anomaly Committee communicated vide F.No.35-5/2017-TS.III dated 28/31 July, 2017, F.No. 33-9/2011-TS.III, dated 6 th October, 2017 and F.No. 33-9/2011-TS.III, dated 17 th November, 2017.
Supplementary agenda BOG-94/05	To consider handing over charge of In-charge Registrar to Prof. M. S. Mir.

Resolution No. 05/94	<p>Chairman, BOG introduced and asked for distribution of supplementary agenda- handing over charge of In charge Registrar to Prof. M.S.Mir among the Board members. The Director strongly opposed the Supplementary Agenda tabled by the Chairman. Two representatives from MHRD were of the opinion that status quo be maintained till regular Registrar joins the Institute. Director also made it clear that he will never implement the supplementary agenda in view of the sequence of communications with the Chairman, BOG in this regard, in particular, unanimous resolution passed in Deans and HODs meeting held on 13.06.2017, to maintain the status quo in the interest of the Institute. The Chairman observed that by opposing tabling of this supplementary agenda and by referring to the so called unanimous resolution passed in the meeting of the Deans and HODs, the I/C Director is only giving himself away. Chairman reiterated that it is his assessment that a change is called for given that incumbent I/C Registrar has been holding charge for nearly five years. He also mentioned that there is no apparent reason why Prof. M. S. Mir cannot be handed over charge given his meritorious background and positive and proactive approach.</p> <p>In view of the continued opposition of I/C Director, the Chairman asked for the matter to be put to vote. Upon voting by the show of hands including the casting vote by the Chairman, BOG agreed to hand over of the charge to Prof. M. S. Mir and implementation of the Chairman's order to that effect immediately.</p>
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Table B.10.1.3i

Minutes of the 93rd meeting of Board of Governors

National Institute of Technology Srinagar, Hazratbal, J&K

held on October 04, 2016 at 12.30 p.m. at NIT Transit House, Safdarjung Enclave, New Delhi .

BOG-93/01	To confirm the Minutes of the 92nd Board of Governors meetings of the Institute held on June 03, 2016 at 03.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.
Resolution No. 01/93	Confirmed.
Special item	To consider the resumption of the class work for autumn session 2016 in the wake of situation in the Kashmir valley.
BOG-93/02	

<p>Resolution No. 02/93</p>	<p>The BOG deliberated on the issue of resumption of class work for autumn-2016 semesters. While taking into account all the options / suggestions put-forth by the members, students, parents, it was decided as under:</p> <p>In case the situation becomes conducive, the class work of Autumn-2016 semester will be resumed on 31st October, 2016 and continued till December 31st, 2016. The examinations for these semesters if not possible to be held at the end of session may be held in February 2017.</p> <p>In case class work is not possible to be resumed on 31 October 2016, the same will then be resumed w.e.f. February 01, 2017 and concluded by 15th April, 2017.</p> <p>The Spring 2017 semesters will start immediately thereafter and shall be concluded by 30th June, 2017.</p> <p>All Saturdays and holidays for these semesters (Autumn-2016& Spring-2017) will be converted into working days.</p> <p>In case class work resumes only from February 01, 2017, the intervening period will be utilized by the students for practical training, project works etc.</p> <p>The faculty of the institute will be available to the students through e-mail / phone / institute website for guiding them and offering clarification etc. for their assigned subjects.</p> <p>Further instructions and information from time to time will be conveyed through institute website.</p>
<p>BOG-93/03</p>	<p>To record action taken report on the decisions of 92nd Board of Governors meeting, held on June 03, 2016 at 03.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.</p>
<p>Resolution No. 03/93</p>	<p>Report recorded.</p>
<p>BOG-93/04</p>	<p>To record report regarding the creation of Delhi Chapter of NIT Srinagar Alumni.</p>
<p>Resolution No. 04/93</p>	<p>Report recorded.</p>
<p>BOG-93/05</p>	<p>To consider recommendation of Grievance Committee for faculty.</p>

and BOG-93/06	And To consider the proposal of ACoFAR Committee for mapping of existing faculty under Four Tier system.
Resolution Nos. 05/93 and05/93	The items were deferred.
BOG-93/07	To consider providing of Ph.D. scholarship to registered DRFs / SRFs of the Institute upto a maximum period of 05 years as per latest MHRD order.
Resolution No. 07/93	Approved.
BOG-93/08	To consider : i) Request of Dr. Firdous Ahmad Wani, (presently on deputation to Jamia Hamdard, New Delhi) for grant of extension of the deputation in his favour till December 2017 ii) To ratify the action taken by the Chairman, Board of Governors in having granted extension in joining in favour of Dr. Firdous A. Wani, Registrar by two months.
Resolution No. 08/93	Extension in deputation not approved. Ratified. Dr. Wani be informed about the decision to join back the Institute.
BOG-93/09	To consider the Progress Report regarding Modernization of National Institute of Technology Srinagar against Rs. 100 Crore grant.
Resolution No. 09/93	After discussion, it was observed that the grant of 100 crores has not been received by the Institute as yet. BOG advised to complete all the preparatory works for executing the projects and tenders etc. can be floated once funds are received.
BOG-93/10	Report of DASA 2016 for information.
Resolution No. 10/93	Report recorded. The BOG congratulated and complimented NIT Srinagar for the smooth and successful completion of DASA 2016 process.

Table B.10.1.3j

Minutes of the 93rd (Adjourned) Meeting of Board of Governors

National Institute of Technology Srinagar, Hazratbal, J&K

Meeting Held on October 13, 2016 at 11.00 a.m. at NIT Transit House, Safdarjung Enclave,
NewDelhi.

Item No. BOG-93/05	To consider recommendation of Grievance Committee for faculty.
Resolution No. 05/93	<p>A power-point presentation was made by the two internal members of the Grievance Committee who were specially called for the meeting. After this, detailed discussions were held on each of the recommendations of the Faculty Grievance Committee and the following was resolved:</p> <p>1 Grievance listed at GR-01 (regarding extending the benefit of 5th CPC-CAS promotions to the faculty members from the due date of eligibility notionally without any financial benefit).</p> <p>The matter of fixation of date of eligibility in respect of Dr. I K Pandita, Dr R. Ambardar, Dr M. Mushtaq and Dr G A Harmann, was brought forth to bring parity with three professors whose date of eligibility was fixed vide order no. 93 of 2013 dated 25-04-2013 and who had been promoted earlier as Professors under 5th CPC in Dec. 2007 through open entry.</p> <p>The Board of Governors (BOG) observed that an order had been issued vide no. 93 of 2013 dated 25-04-2013 in favour of three professors for their placement as professors under CAS. However the supporting documents, on the basis of which BOG issued above order, are not placed.</p> <p>Therefore the BOG desires that the case be returned to Faculty Grievance Committee to re-examine it in light of all supporting documents & come out with fresh recommendations.</p> <p>2 Grievances listed at GR-02, GR-03, GR-04 and GR-05 (regarding extending the benefit of CAS promotions to the faculty members from the due date of eligibility notionally without any financial benefit).</p> <p>The BOG examined the provision 4(q) of MHRD circular issued vide F. No. 33-7/2011-TS.III; dated 14-03-2012, which provides for the arrangement in the cases where CAS interviews were not conducted for three (03) years or more and which reads as under:</p> <p><i>"All Institutes shall strive to conduct annual selection processes regularly. In case of Institutes that have not conducted CAS interviews for 3 years or more, Selection Committees may, as a onetime measure, examine scholastic contribution of internal candidates made after the</i></p>

last interview and recommend a salary and AGP they would have earned now, had the Selection Committee met at the appropriate time".

The BOG observed that the selection committees in the cases of Faculty mentioned under BOG-05-(GR-02 to GR-05) have not carried out the exercise as mentioned in previous paragraph. As the CAS was held in 2007 & thereafter it was conducted in 2013 only, therefore BOG observed that the above mentioned provision 4(q) of MHRD circular may be used. This will call for constitution of Selection Committee as per statutory provisions and relevant MHRD circulars. ,

The representative of MHRD informed that the term of visitor nominees has already expired. Therefore Board decided that MHRD may be asked to expedite the matter and issue the valid list of visitor nominees.

In a similar matter, MHRD representative has stated that CAS cannot be done at this point in time. However it was brought to the notice of BOG that in all these cases one time CAS process, as desired by MHRD vide communication F. No. 33-7/2011-TS.III; dated 14-03-2012, stands already completed and orders issued way back in 2013 as these cases belong to the period prior to 30th April 2013 and only date of eligibility needs to be re-fixed by selection committee.

Board decided that MHRD may also be requested to allow application of provision 4(q) of MHRD circular issued vide F. No. 33-7/2011-TS.III; dated 14-03-2012 to cases prior to 2007 to be able to remove the anomalies of this period. The reason stated is that prior to 2007 NIT Srinagar conducted CAS in year 2001 and thus there was a gap of six year intervening period in between two subsequent CAS interviews.

The BOG further decided that the dates of eligibility thus recommended by the said selection committee, for each case, shall be submitted for approval to be granted by Chairman BOG, for issuance of orders.

- 3 GR-06, GR-07, GR-08 and GR-09 (regarding: (1) grant to promotion from date of eligibility and (2) consideration of 2nd selection Committee recommendations).

The BOG observed that these cases also require a review of the dates of effect given to the CAS up-gradations. The BOG decided that the same process as recommended in (2) above be followed for grant of CAS promotion from dates of eligibility. Thereafter, the sealed envelopes in their cases be opened by the Chairman BOG for implementation.

- 4 GR-10 regarding: (Counting of continuous previous Service of Mr Shabir Ahmad Sofi, Assistant Professor (PB3/GP6000 - Equivalent to

Pre-revised Lecturer), rendered at NIT Srinagar EDP cell as Research Assistant and at KITE Polytechnic as Lecturer).

The BOG did not accept the recommendation.

- 5 GR-11 regarding Counting of previous Adhoc Service of Dr G R Khan rendered at University of Kashmir from 01-04-1991 to 30-04-1993 for service and seniority benefits.

With regard to this case, it is observed that counting of Adhoc Service for CAS promotion was provided in the UGC/ AICTE rules, subject to fulfilment of certain conditions. As the conditions stipulated in UGC/ AICTE rules were being fulfilled, the Faculty Grievance Committee has accordingly recommended the case. This recommendation is also consistent with the earlier BOG appointed committee in this case. The BOG thus decided to accept the recommendation of the Faculty Grievance Committee even as the MHRD representative was opposed to it.

- 6 GR-12 and GR-13 regarding counting of previous continuous Adhoc Service of Dr Tanveer Jalal, Associate Professor, Mathematics Department and Dr. Tabassum Ara, Associate Professor, Chemistry Department rendered at University of Kashmir.

BOG accepted recommendations in these cases as-well since these are of similar nature as GR-11.

- 7 GR-14 regarding request of Dr Tanveer Jalal, Associate Prof (PB4/AGP9000) for release of increments for the teaching service rendered outside the country at Yanbu Industrial College, Kingdom of Saudi Arabia during the period from 01-10-2010 to 30-09-2012.

The case may be brought in the next board meeting along with all the supporting documents related to the other Faculty Members who were granted increments for such teaching service/ research work done.

- 8 GR-15 regarding Request of Dr. M. Ashraf Shah for treating period with effect from 20-06-2011 to 03-10-2011 as active service period and release of salary for the said period.

	<p>The BOG did not accept the recommendation.</p> <p>9 GR-16 and GR-17 regarding Consideration of Cases for upgradation under 6th CPC-CAS with effect from date of eligibility (a) from AGP 6000 to 7000, (b) from AGP 7000 to 8000 and (c) from AGP 9000 to 10000.</p> <p>MHRD representative explained to the Board that MHRD had sought an advice of law Department in the matter. The opinion of the law department has been already conveyed to the Institute wherein it is mentioned that the matter is pending before the Supreme Court of India.</p> <p>However during deliberations it was brought to the notice of Board that these cases are relevant to the period prior to 30th April 2013 (the cut-off date fixed by MHRD for implementation of CAS promotions).</p> <p>In view of this, BOG decided that MHRD be requested to look into the matter a fresh and get legal opinion of Solicitor General of India for seeking the necessary relief, with regard to the above matter, from the Hon'ble Supreme Court, so that the Institute is in a position to address the long pending grievances of the deserving faculty. This is necessary for resolving anomalies of period prior to 30th April 2013.</p> <p>The BOG further decided that since the instant cases are similar to cases mentioned under BOG-05-(GR-02) and hence once allowed by MHRD, the cases can be treated on the analogy of (1) above and the dates of eligibility thus recommended by the said selection committee, for each case, shall be submitted for approval to be granted by Chairman BOG, for issuance of orders.</p> <p>10 GR-18 regarding <i>counting of service rendered abroad</i>.</p> <p>The matter was discussed and the BOG did not accept the Plea of concerned Faculty Members.</p>
<p>Item No. BOG-93/06</p>	<p>To consider the proposal of ACoFAR Committee for mapping of existing faculty under Four Tier system.</p>

Resolution No. 06/93	<p>The BOG observed that RR's for 4-Tier structure have been approved by Council of NIT's and as such the proposal of any modification will require approval of the Council.</p> <p>As such the proposal needs to be submitted for consideration of the Council through its Standing Committee. During the discussions Board was informed that the earlier recruitments have been made as per qualifications prescribed in previous schemes circulated by GOI wherein recruitments have been done with M. Tech as well as B. Tech qualifications. In view of this it is therefore justified to incorporate modifications in the present RRs of 4-tier faculty structure so that a fair chance of upgradation is made available to the existing faculty with M. Tech qualifications at lower level cadres. It was also observed that NIT Srinagar has been working under disadvantageous locational and other constraints. The BOG thus resolved as under:</p> <p>The proposal be again studied by the same committee which may also explore the possibilities of obtaining feedback from faculty of other NIT's. The proposal be reframed on the basis of feedback and the said special locational and other constraints facing NIT Srinagar. Further options be included with proper weightage for candidates with M.Tech qualifications and teaching experience.</p>
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Table B.10.1.3k

The minutes are confirmed in the meeting of 94th Board of Governors held on June 19, 2017 at NIT Transit House, New Delhi with the addition of the sentence *"The action with regard to points 2,3,5, and 6 as contained in item No. 05/93 of BOG 93rd meeting dated 13-10-2016 be initiated only after obtaining concurrence of MHRD"*.

**Minutes of the 92nd meeting of Board of Governors
National Institute of Technology Srinagar, Hazratbal, J&K
held on June 03, 2016 at 03.30 p.m. in the Committee Room of the
National Institute of Technology Srinagar.**

BOG-92/01	To confirm the Minutes of the 91 st Board of Governors meetings of the Institute, held on April 11, 2016 at 02.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.
Resolution No. 01/92	The minutes of the 91 st meeting of the Board of Governors were confirmed with inclusion of comments received from Mr. S. P. Goyal, Joint Secretary (TEL), MHRD, Department of Secondary & Higher Education.
BOG-92/02	To record action taken report on the decisions of 91 st Board of Governors meeting,

	held on April 11, 2016 at 02.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.
Resolution No. 02/92	Record reported.
BOG-92/03	To record report on nomination of two faculty members on the Board of Governors of the Institute as per NIT Act 2007.
Resolution No. 03/92	Record reported.
BOG-92/04	To consider the nomination of the Board of Governors on the Finance Committee as per the rules of First Statutes under the National Institute of Technology Act, 2007.
Resolution No. 04/92	Prof. Rajinder Ambardar, Professor, Metallurgical & Materials Engineering department is nominated as member on the Finance Committee from BOG members.
BOG-92/05	To consider the request of the Mr. Mohammad Farooq Mir, Assistant Librarian to fix the superannuation age in his favour as 62 years.
Resolution No. 05/92	<p>The matter was discussed and it was noted that :</p> <p>a) The BOG in its 91st meeting after considering the report of the constituted committee decided to refer the matter to MHRD for their opinion.</p> <p>b) However, MHRD order [F.No.5-3/2012.TS-III dated 31-01-2013 and F.No.3-4/2013-TS dated 12-07-2013 (copies enclosed)] allows granting the benefit of age of superannuation as 62 years in favour of Asstt. Librarians subject to fulfillment of qualification as prescribed by the UGC.</p> <p>c) As per UGC notifications issued vide its order No. F.3-1/94(PS)-7 dated 22-09-2006 candidates having M.Phil. and Ph.D. are exempt from NET. Since Mr. Mohammad Farooq Mir has M.Phil. qualification and as such he is exempted from the NET qualification. In view of this, no relaxation in qualification is required in case of the candidate as he possess M.Phil. qualification.</p> <p>d) Mr. Farooq is therefore entitled to the benefit of superannuation of at the age of 62 years as per the mentioned MHRD order.</p> <p>e) MHRD may be informed of the above and necessary orders for giving the benefit to Mr Farooq be issued thereafter.</p>
BOG-92/06	To consider the report of the Fact Finding Committee of the Institute.
Resolution No. 06/92	The report submitted by Chairman of the Committee Prof. R. Ambardar in a sealed envelope was opened in the meeting with permission of the Chair and thereafter it was deliberated upon thoroughly. The recommendations given by the committee at page no. 18 and 19 were considered one by one and following decisions taken in respect of each recommendation:

	<p>1. Confidence building: It was decided that interaction with students must be enhanced in a structured way and following ways be adopted for the same:</p> <p>The existing clubs of students is used for interaction by the administration periodically for a review of the activities and issues. This should be done atleast twice in one semester.</p> <p>A lunch or dinner is arranged once in each semester where students and faculty would be together.</p> <p>The HODs must organize an interaction with the students of each class once in a month. They may take alongwith one or more other faculty members who are not associated with that class.</p> <p>Saturdays must be utilized in curricular activities through clubs and departments. Sports activities should be increased.</p> <p>2. The departments must publicize the procurements made or procurements under process for laboratory development and other activities in the department through the Institute website and also by a departmental newsletter, managed by students under supervision of faculty.</p> <p>3. In order to attract more faculty members / officers to take up proctorial duties, the benefits for the same needs to be enhanced but simultaneously it needs to be conveyed that no staff member can decline any assignment given to him.</p> <p>4. The Wardens shall submit a report of their periodic visits to the hostel and interaction held with the hostel residents to the Director every fortnight.</p> <p>5. Since the class representatives are already in place, the departments should formalize interaction with these representatives and report of interaction must be kept on record.</p> <p>6. The BOG observed that since the FIR is understood to be against unknown persons as such no discussion is required as this stage.</p> <p>7. The evaluated answer script of the major examination must be got signed by the student after he goes through it. They must also record that he has received back the Minor exam scripts.</p> <p>8. Heads of the Departments must ensure that lower semesters are taught by senior faculty members.</p> <p>9. A booklet containing hostel rules and regulations and other information must be made available to every student at the time of admission in the Institute. This shall be ensured by the Dean Students Welfare.</p> <p>10. The Institute must organize motivational andbehavioural lectures by professional and eminent persons for the students in a structured manner under extracurricular activities.</p>
BOG-92/07	To consider the framing of modalities for constitution of a Students Council.
Resolution	The BOG after detailed deliberations found that the model of Student Council at

No. 07/92	IEST Shibpur may be adopted by the Institute. However, before implementation, the model may be studied by a Committee including student nominee also for any changes that may be required.			
BOG-92/08	To consider the representations of the students for introduction of NCC in the Institute.			
Resolution No. 08/92	Approved. The programme details shall be worked out by the Institute for the same.			
BOG-92/09	Action taken on the decisions of the meeting held on 19-04-2016 in Delhi with student representatives			
Resolution No. 09/92	The Director, Prof. Rajat Gupta presented the action taken in respect of this item as detailed below:			
	S.No.	Decision	Action taken	BOG order
	1	A new Committee for students Grievance Redressal which has been constituted with two external members will do the fact finding now and its Report is likely to be submitted by 15th may, 2016.	Report already submitted and considered by BOG.	Orders are recorded in item no. BOG-92/06.
	2	BOG to consider the report and formation of students' council and its modalities.	Considered by BOG on 03-06-2016.	Orders are recorded in item no. BOG-92/07.
	3	BOG meeting likely to be held within 20th of May as per the convenience of Chairman.	BOG meeting was scheduled on 27-05-2016 but had to be deferred and was held on 03-06-2015.	No orders required.
	4	Optional external evaluation for minor one on written request and irrevocable basis.	Students were informed to give option through written notice but no one opted.	Record reported.
	5	Enhancement of medical facilities within 3-4 months.	Staff engagement is near finalization after advertisement and scrutiny. Equipment supply orders issued.	Record reported.
6	Prefab two hostels having	Work is going on	Record	

	80 rooms and prefab 15 class rooms likely to be completed within 6 months.	satisfactorily.	reported.
7	Some medical claims already borne by the Institute and those submitted the bills will also be reimbursed.	Reimbursement made on all claims.	Record reported.
8	Food and fruit corner in the campus to be installed.	N.I. T. issued and these facilities will be soon operational.	BOG ordered to make these operational by 30-06-2016.
9	Encroachment of NIT land has already been taken up, however it will be vigorously pursued with State Government.	Matter already taken up with D. C. Srinagar.	BOG advised to write to Commissioner / Secretary, Higher Education of J&K Government also.
10	All National festivals to be celebrated.	Implemented.	Record reported.
11	Demands relating to improved facilities in the hostels will be expeditiously looked into.	System fast tracked.	Record reported.
<p>The BOG advised that periodic reviews must be made on these issues and students taken into confidence about these during interactions.</p>			

Table B.10.1.31

**Minutes of the 91st meeting of Board of Governors National Institute of Technology Srinagar,
Hazratbal, J&K held on April 11, 2016 at 02.30 p.m. in the Committee Room of the National
Institute of Technology Srinagar.**

BOG-91/01	To confirm the Minutes of the 90 th Board of Governors meeting of the Institute, held on December 30, 2015, 11.45 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.				
Resolution No. 01/91	Confirmed with the inclusion of the comments received from Mr. S. P. Goyal, Joint Secretary, MHRD, New Delhi.				
BOG-91/02	To record action taken a report on the decisions of 90 th Board of Governors meeting, held on December 30, 2015, 11.45 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.				
Serial	Meeting No. & Date	Agenda item No.	Resolution	Action was taken by the Institute	Resolution / Comments of the BOG
1	90th 30-12-2015	10	The BOG congratulated the Institute administration and staff for having succeeded to have the external review done on time. The BOG advised taking necessary steps for implementing suggestions of the external review report.	Necessary steps have been initiated.	A quantified report of the action taken to be submitted in the next meeting of the BOG.
2	90th 30-12-2015	11	<p>During the presentation by Dean P&D, it was revealed that at present as per LAWDA norms the building permission is restricted to G+2 but the proposals of the Institute prepared by CPWD are for G+5 blocks. It was further informed that the Government of J&K Town Planning Department is working on the revised Master Plan of Srinagar City wherein a provision for permission for G+5 type structures is envisaged.</p> <p>Based on these facts the BOG: a) granted in-principal approval for the following two works as G+5 structures through CPWD subject to the permission of the concerned authorities:</p>		It was noted that permission for these structures has been granted for G+2 as per existing norms. The Director informed that an assurance by the concerned authorities has been given that permission for G+5 to NIT, Srinagar shall be

			<p>1. Construction of Academic Block at an estimated cost Rs. 1,58,45,12,000/-.</p> <p>2. Construction of Multi-Facility Block at an estimated cost of Rs.75,98,42,300/-.</p> <p>b) In case the permission for G+5 proposal is not granted the proposal shall be revised in terms of the cost of estimate and resubmitted to the BWC for fresh consideration for the revised proposal.</p> <p>c) In any case, this whole proposal would be reconsidered afresh by each statutory authority of the NIT (i.e. the BWC, the FC & the BOG) upon receiving the approval of the J&K Town Planning Department to entrust G+5 type of structures.</p>		<p>granted very soon. It was advised that the grant of permission for G+5 from the concerned authorities needs to be pursued vigorously.</p>
3	FC 28-09- 2015	04	FC did not approve the request of officiating Registrar for grant of additional pay.	A report was submitted about deputation of Registrar of Institute, Dr. Firdous Ahmad Wani in the 91 st meeting of BOG dated 11-04-2015.	Dr. Firdous Ahmad Wani, Registrar who is on deputation be informed to join back the Institute immediately as the presence of a regular Registrar is essential for the smooth functioning of the Institute.
BOG- 91/03	To record report on the action taken by the Chairman, BOG in having approved engagement of temporary faculty for Spring Session 2016 against the vacant faculty positions.				

Resolution No. 03/91	Report recorded. The Board was informed that the due process for such contractual appointments has been strictly adhered to. The Institute was further advised to stringently adhere to the provisions contained in Statute No. 28 of the First Statutes under the NITSER Act, 2007.
BOG-91/04	To record a report on the stoppage of sitting fee amount to the officials of Ministry / attached Institutions for attending the meetings of Board of Governors, Finance Committee and BWC etc.
Resolution No. 04/91	Report recorded.
BOG-91/05	To consider the recommendations of the constituted Committee to fix the superannuation age of Mr. Mohammad Farooq Mir, Assistant Librarian as 62 years.
Resolution No. 05/91	In view of the recommendations of the committee at para (2) of their report, it was decided to refer the matter to MHRD for their opinion.
BOG-91/06	To consider the recommendations of the constituted Committee with regard to leave entitlement to Adjunct Faculty in the Institute.
Resolution No. 06/91	Since adjunct faculty is not a regular staff, earned leave is not admissible.
BOG-91/07	To consider the report of the committee constituted to examine the case of Dr. G. R. Khan.
Resolution No. 07/91	Mr. S. P. Goyal, Joint Secretary, MHRD and member BOG, desired that copy of the minutes of Selection committee of his engagement in the University of Kashmir may be obtained and put up at the next meeting of Board of Governors for consideration.
BOG-91/08	To consider the two orders of Hon'ble High Court of J&K in matters related to Career Advancement Scheme (CAS).
Resolution No. 08/91	The cases be pursued. However, the grievances of faculty be fast-tracked so that such cases do not arise or at least are minimized. It was strongly pleaded by the Institute administration that the service interests of the existing faculty need to be protected which otherwise would lead to a non-congenial environment as the affected faculty feels disgruntled which is not a healthy situation. The BOG noted with concern that there is need to address the grievances; however, this can be done within the framework of rules only and it is essential that the Institute Administration and the faculty members appreciate that.
BOG-91/09	To consider the issues discussed in the brainstorming session held on 10-04-2016 for appropriate advice and orders.
	Item was withdrawn.
BOG-91/10	To consider termination of service as Technical Resignation in favor of Prof. R. K. Wanchoo, former Director of the Institute.

Resolution No. 10/91	It was decided to refer the matter to MHRD.
BOG-91/11	To consider the minutes and recommendations of the Finance Committee made at its meeting held on 11-04-2016 at 10.30 a.m. in the Committee Room of the NIT Srinagar.
Resolution No. 11/91	The Institute was advised to place the same before the Board of Governors after the finalization and confirmation of the Minutes of the 1 st Meeting of the Finance Committee of 2016, in its next meeting.
BOG-91/12	To consider the recommendations of the Senate made at its meeting held on 08-04-2016 in the NIT Srinagar, Hazratbal Kashmir.
Resolution No. 01/91	The Institute was advised to place the same before the Board of Governors after the finalization and confirmation of the Minutes of the referred meeting of the Senate, in its next meeting.

Table B.10.1.3m

Minutes of the 90th meeting of Board of Governors
National Institute of Technology Srinagar, Hazratbal, J&K
held on December 30, 2015 at 11.45 a.m. in the NIT Transit House,
Safderjung Enclave, New Delhi

BOG-90/01	To confirm the Minutes of the 89th Board of Governors meetings of the Institute, held on September 28, 2015 11.00 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.
Resolution No. 01/90	Confirmed. The modifications incorporated in the minutes of the Finance Committee meeting dated 28-09-2015 shall also get included in these minutes.
BOG-90/02	To record action taken report on the decisions of 89 th Board of Governors meeting, held on September 28, 2015 11.00 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi
Resolution No. 02/90	Report recorded alongwith the following decisions: a) In case of resolution no. 04/89 regarding Senate item 20/07 i.e. NIT Srinagar distinguished Alumni Award, it was decided that two awards shall be presented every year during the Alumni Meet and the constituted committee shall identify the awardees accordingly.
BOG-90/03	To record report on the action taken by the Director in having approved engagement of two Electricians on contractual basis in the P&D Wing of the Institute.

Resolution No. 03/90	Ratified.
BOG-90/04	To record report on the conduct of DASA 2016 by NIT Srinagar.
Resolution No. 04/90	Report recorded.
BOG-90/05	To record report on the action taken by the BOG, BOG in having approved continuation of Mr. M. M. Shawl and Mr. P. L. Sapoo.
Resolution No. 05/90	Report recorded. However, the advice of IFD may be sought so that it is ensured that there is no scope for errors in calculation of monthly consolidated emoluments in such engagements.
BOG-90/06	To ratify the action taken by the Chairman, Board of Governors in having authorized the Director to constitute the Departmental Visiting Committees.
Resolution No. 06/90	Ratified.
BOG-90/07	To ratify the action taken by the Chairman, Board of Governors in having approved composition of a Committee for External Review.
Resolution No. 07/90	Ratified.
BOG-90/08	To approve the minutes of Selection Committee of the Trainee Teachers
Resolution No. 08/90	Recommendations of the Selection Committee of the Trainee Teachers are approved. Needful may be done so that the selected candidates can join IIT Delhi as Ph.D. scholars for the January 2016 session after submission of prescribed bond which has already been vetted by the Standing Counsel of the Institute. The maximum duration is 07 years which has been confirmed from IIT Delhi and included in the Bond.
BOG-90/09	To consider the report of the Committee for mapping under Restructuring of Non faculty staff
Resolution No. 09/90	The BOG noted that the proposal has been circulated to all the members as per the decision in the previous meeting. However, while no comment was received, Prof. Rather pointed out certain errors in the proposal during discussion. Chairman, BOG also observed that the Restructuring and the corresponding Mapping proposal is important requiring great care inasmuch as the structure / positions / posts proposed must take into account needs of the Institute in the foreseeable future. Further, mapping /

	<p>deployment of the existing staff against the proposed structure / positions has to be done as per the prescribed rules ensuring at the same time that there is no or minimal possibility of any anomalies arising as a result of the exercise. It was, therefore, decided that the Director should get this proposal examined / reworked out by a small Group / Committee comprising Prof. G. M. Rather, member BOG and others. The concerned staff from Personnel Department of the Institute requires to provide necessary assistance to this Committee and in fact, be actively involved in this exercise. Upon satisfying himself with the report of this Committee, the Director can put it up to the Chairman, BOG for final approval for implementing the same.</p>
BOG-90/10	<p>Consider the report of the External Review Committee.</p>
Resolution No. 10/90	<p>The BOG congratulated the Institute administration and staff for having succeeded to have the external review done on time. The BOG advised to take necessary steps for implementing suggestions of the external review report.</p>
BOG-90/11	<p>To consider grant of in Principle approval for construction of two new multi storied buildings as per approved Master Plan.</p>
Resolution No. 11/90	<p>During the presentation by Dean P&D, it was revealed that at present as per LAWDA norms the building permission is restricted to G+2 but the proposals of the Institute prepared by CPWD are for G+5 blocks. It was further informed that the Government of J&K Town Planning Department is working on the revised Master Plan of Srinagar City wherein a provision for permission for G+5 type structures is envisaged.</p> <p>Based on these facts the BOG:</p> <ol style="list-style-type: none"> a) granted in-principal approval for the following two works as G+5 structures through CPWD subject to the permission by the concerned authorities: <ol style="list-style-type: none"> 1. Construction of Academic Block at an estimated cost Rs. 1,58,45,12,000/-. 2. Construction of Multi facility Block at an estimated cost Rs.75,98,42,300/-. b) In case the permission or G+ 5 proposals is not granted the proposal shall be revised in terms of the cost of estimate and resubmitted to the BWC for fresh approval for the revised proposal.
BOG-90/12	<p>To consider the report on the activities of the Innovation, Incubation and Entrepreneurship Development Centre (IIEDC).</p>

Resolution No. 12/90	<p>The BOG noted with appreciation the steps that have been taken by the Institute under the Centre. It was advised that the Vision and Mission statement should include Incubation very prominently. It was advised that the activities should be pursued as per the Vision and Mission statement and collaboration with similar setups in the country should be explored very effectively. Further, it was advised to publicize the activities undertaken by this centre and a quarterly or six monthly News-letters may be printed by the centre for this purpose in addition to other mediums of publicity.</p> <p>Further BOG agreed in-principal to the proposal of setting up of an independent Incubation Centre to support the industries, entrepreneurship and start up in the following areas and advised for preparation of a DPR with help and involvement of an appropriate outside agency, if required:</p> <ol style="list-style-type: none"> 1. Mechanical Engineering oriented activities 2. Chemical Engineering oriented activities 3. Civil Engineering oriented activities 4. Electronics & Comm. Engineering oriented activities 5. Electrical Engineering oriented activities 6. Information Technology oriented activities
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Table B.10.1.3n

Action taken report:

To record action taken report on the decisions of Board of Governors Meeting held on 21-11-2017 in the NIT Transit House, Safderjung Enclave, New Delhi.

BOG-95/01	To confirm the minutes of the 95 th Board of Governors meeting of the Institute held on June 19 th , 2017 in NIT Transit House, at Safdarjung Enclave, New Delhi.	
Resolution No. 01/95	<p>Minutes Confirmed with the change that the words, 'so called' be replaced by 'as reported' in the twelfth line of the Resolution No. 05/94 of BOG-94/05.</p> <p>This change was sought to be made by the Chairman in view of the sentiments expressed by the then I/C Director, Prof. A. R. Dar in one of his communications.</p> <p>While confirming the minutes, the BOG was informed that with regard to Resolution No. 04/94 of BOG-94/04 the issues have been, by and large, addressed by the Revised final modified RRs and the recommendations of the Anomaly Committee.</p>	No action called for.
BOG-95/02	To record action taken report on the decisions of 93 rd Board of Governors meeting, held on October	

	04, 2016 and Adjourned meeting on October 13, 2016 at NIT Transit House, Safdarjung Enclave, New Delhi.	
Resolution No. 02/95	Report Recorded.	No action called for.
BOG-95/03	To ratify the action taken by the Chairman, BOG in having approved enhancement of wages as per the Labour Schedule of Government of India in favour of Contractual workers engaged on compassionate basis.	
Resolution No. 03/95	Ratified.	Office Order issued.
BOG-95/04	To ratify the action taken by the Chairman, BOG in having approved extension of cut-off date for usage of CPDA of Block 2014-17 by faculty members upto 31-03-2018.	
Resolution No. 04/95	Ratified.	Office Order issued.
BOG-95/05	To consider the recommendations of the Central Purchase Committee with regard to releasing of remaining 30% payment in favour of M/S New Hi-Tech Enterprises, Srinagar against supply of gold medals for convocation 2013, held for the batches from 2004-2011.	
Resolution No. 05/95	The BOG advised to refer the matter for legal opinion and take a decision accordingly.	Matter under consideration.
BOG-95/06	Adoption of communications of Vigilance Section of Department of Higher Education, MHRD, received by the Institute.	
Resolution No. 06/95	Adopted	No action called for.

BOG-95/07	To consider the minutes of 8 th , 9 th and 10 th meetings of NIT Council held on 25-09-2014, 01-10-2015 and 26-05-2017 respectively.	
Resolution No. 07/95	Report Recorded. The minutes of 10 th meeting of NIT Council was tabled in the meeting.	No action called for.
BOG-95/08	To adopt amendments in the First Statutes of the National Institutes of Technology (NITs).	
Resolution No. 08/95	Adopted	No action called for.
BOG-95/09	To adopt the recommendations of the Anomaly Committee on new Recruitment Rules for Faculty in NITs and IEST regarding promotion of existing Assistant Professors to Associate Professors and mapping of existing Associate Professors with AGP of Rs.9,000/- to Rs. 9,500/- and Professors with AGP of Rs. 10,000/- to Rs.10,500/- communicated vide F. No. 33-9/2011-TS.III, dated 6 th October, 2017 and F. No. 33-9/2011-TS.III, dated 17 th November, 2017	
Resolution No. 09/95	Adopted. The communications vide F.No. 33-9/2011-TS.III, dated 17 th November, 2017 was tabled in the meeting.	Exercise under process.
BOG-95/10	To consider the recommendations of the Finance Committee made at its meeting held on 04-10-2016 at 10.30 a.m. at NIT Transit House, Safdarjung Enclave, New Delhi.	
Resolution No. 10/95	The recommendations of the Finance Committee are Approved	No action called for.
BOG-95/11	To approve the recommendations of the Selection Committee for appointment of Registrar for NIT Srinagar.	
Resolution	The recommendations of the Selection Committee	Offer Letter issued.

No. 11/95	for selection of Registrar for NIT Srinagar are Accepted and Approved. The offer letter may first be issued to the incumbent at S.No. 1, i.e., Dr. Nisar Ahmad Mir, at the earliest as per the recommendations of the Selection Committee. The necessary contract may be signed with the selected candidate.	Dr. Nisar Ahmad Mir has joined as Registrar on 24.01.2018.
BOG- 95/12	To consider the request of existing Assistant Professors for promotion as Associate Professors as and when they complete their Ph.D.	
Resolution No. 12/95	It was noted that all the above faculty members have teaching experience of more than 09 years and are already pursuing their Ph.D. programme. The BOG was of the view that the faculty members are getting covered for upgradations under the recommendations of the Anomaly Committee on new Recruitment Rules communicated vide F. No. 33-9/2011-TS.III, dated 6 th October, 2017, as a onetime measure. However, it was decided to get a clarification from MHRD to this effect.	Matter referred to Ministry vide letter No.NIT/B&D/2017/2003/.Dated 06-12-2017
BOG- 95/13	To approve for correcting and re-fixing the dates of eligibility of some of the Faculty members of NIT Srinagar.	
Resolution No. 13/95	It was decided to bring the new revealed facts before the Board of Governors for allowing to carry out necessary exercise for implementing the selection committee recommendations, under rules, with regard to all cases in order to give effect to upgradations from the dates of eligibility. Accordingly the item was included in BOG agenda which was circulated to all members. A letter No. 16-7/2017-TS.III dated 20 th November, 2017 was received from MHRD on Nov 21, 2017 in which it was suggested to drop the item from the BOG agenda and instead refer the same to MHRD for their concurrence as decided earlier. However, the item was taken up in the BOG to inform the BOG about the new information that had got revealed about the subject. The BOG discussed the issue and concluded that	Matter referred to MHRD Vide letter No. NITs/PD/17/4754 dated:25-11-2017, followed by another reminder No.NIT/DO/18/4955 dated: 15-01-2018. The decision from MHRD is yet awaited.

	<p>the matter, with complete details of new revelations, be sent to the MHRD for their concurrence with a request to convey the same within the shortest possible time. Quick resolution of these faculty grievances will help the institute to progress the recruitment of new faculty as well as mapping/up gradation of the existing faculty to avoid any further anomalies.</p> <p>Regarding other faculty grievances presented and discussed in 94th BOG meeting, seeking of concurrence from MHRD for their consequent redressal stands as decided by BOG for which concurrence as envisaged will also be sought.</p>	
BOG-95/14	To consider the recommendations of the Finance Committee made at its meeting held on 21-11-2017 at 10.30 a.m. at NIT Transit House, Safderjung Enclave, New Delhi.	
Resolution No. 14/95	Recommendations of the Finance Committee were circulated amongst the members through mail on 25 th November 2017. No comments were received.	No action called for.

Table B.10.1.3o

To record action taken report on the decisions of 93rd Board of Governors meeting, held on October 04, 2016 and Adjourned meeting on October 13, 2016 at NIT Transit House, Safdarjung Enclave, New Delhi.

BOG-93/01	To confirm the Minutes of the 92 nd Board of Governors meetings of the Institute, held on June 03, 2016 at 03.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.	
Resolution No. 01/93	Confirmed.	No action called for.
Special item	To consider the resumption of the class work for autumn session 2016 in the wake of situation in the Kashmir valley.	
BOG-93/02		
Resolution No. 02/93	The BOG deliberated on the issue of resumption of class work for autumn-2016 semesters. While taking into account all the options / suggestions	Implemented.

	<p>put-forth by the members, students, parents, it was decided as under:</p> <p>In case the situation becomes conducive, the class work of Autumn-2016 semester will be resumed on 31st October, 2016 and continued till December 31st, 2016. The examinations for these semesters if not possible to be held at the end of session may be held in February 2017.</p> <p>In case class work is not possible to be resumed on 31 October 2016, the same will then be resumed w.e.f. February 01, 2017 and concluded by 15th April, 2017.</p> <p>The Spring 2017 semesters will start immediately thereafter and shall be concluded by 30th June, 2017.</p> <p>All Saturdays and holidays for these semesters (Autumn-2016& Spring-2017) will be converted into working days.</p> <p>In case class work resumes only from February 01, 2017, the intervening period will be utilized by the students for practical training, project works etc.</p> <p>The faculty of the institute will be available to the students through e-mail / phone / institute website for guiding them and offering clarification etc. for their assigned subjects.</p> <p>Further instructions and information from time to time will be conveyed through institute website.</p>	
BOG-93/03	To record action taken report on the decisions of 92nd Board of Governors meeting, held on June 03, 2016 at 03.30 p.m. in the Committee Room of the National Institute of Technology	

	Srinagar.	
Resolution No. 03/93	Report recorded.	No action called for.
BOG-93/04	To record report regarding the creation of Delhi Chapter of NIT Srinagar Alumni.	
Resolution No. 04/93	Report recorded.	No action called for.
BOG-93/05 and BOG-93/06	To consider recommendation of Grievance Committee for faculty. And To consider the proposal of ACoFAR Committee for mapping of existing faculty under Four Tier system.	
Resolution Nos. 05/93 and 06/93	The items were deferred.	These items were placed in adjourned meeting held on 13-10-2016.
BOG-93/07	To consider providing of Ph.D. scholarship to registered DRFs / SRFs of the Institute upto a maximum period of 05 years as per latest MHRD order.	
Resolution No. 07/93	Approved.	Orders issued and implemented.
BOG-93/08	To consider : i) Request of Dr. Firdous Ahmad Wani, (presently on deputation to Jamia Hamdard, New Delhi) for grant of extension of the deputation in his favour till December 2017 ii) To ratify the action taken by the Chairman, Board of Governors in having granted extension in joining in favour of Dr. Firdous A. Wani, Registrar by two months.	
Resolution No. 08/93	Extension in deputation not approved. Ratified. Dr. Wani be informed about the decision to join back the Institute.	Dr. Wani was conveyed about the decision of the BOG. However, he opted for premature retirement from the Institute.
BOG-93/09	To consider the Progress Report regarding Modernization of National	

	Institute of Technology Srinagar against Rs. 100 Crore grant.	
Resolution No. 09/93	After discussion, it was observed that the grant of 100 crores has not been received by the Institute as yet. BOG advised to complete all the preparatory works for executing the projects and tenders etc. can be floated once funds are received.	So far we have utilized 9.2 crores out of this fund under the 1st phase. Some of the tenders are at last stage of processing. Works for executing the projects and tenders etc. are going on.
BOG-93/10	Report of DASA 2016 for information.	
Resolution No. 10/93	Report recorded. The BOG congratulated and complimented NIT Srinagar for the smooth and successful completion of DASA 2016 process.	No action called for. Felicitations have been conveyed.

Table B.10.1.3p

Adjourned meeting dated 13-10-2017

Item No. BOG-93/05	To consider recommendation of Grievance Committee for faculty.					
Resolution No. 05/93	<p>A power-point presentation was made by the two internal members of the Grievance Committee who were specially called for the meeting. After this, detailed discussions were held on each of the recommendations of the Faculty Grievance Committee and the following was resolved:</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 20px; text-align: center;">1</td> <td>Grievance listed at GR-01 (regarding extending the benefit of 5th CPC-CAS promotions to the faculty members from the due date of eligibility notionally without any financial benefit).</td> </tr> <tr> <td></td> <td>The matter of fixation of date of eligibility in respect of Dr. I K Pandita, Dr R. Ambardar, Dr M. Mushtaq and Dr G A Harmann, was brought forth to bring parity with three professors whose date of</td> </tr> </table>	1	Grievance listed at GR-01 (regarding extending the benefit of 5th CPC-CAS promotions to the faculty members from the due date of eligibility notionally without any financial benefit).		The matter of fixation of date of eligibility in respect of Dr. I K Pandita, Dr R. Ambardar, Dr M. Mushtaq and Dr G A Harmann, was brought forth to bring parity with three professors whose date of	Case is returned to Grievance Committee, its report is awaited
1	Grievance listed at GR-01 (regarding extending the benefit of 5th CPC-CAS promotions to the faculty members from the due date of eligibility notionally without any financial benefit).					
	The matter of fixation of date of eligibility in respect of Dr. I K Pandita, Dr R. Ambardar, Dr M. Mushtaq and Dr G A Harmann, was brought forth to bring parity with three professors whose date of					

	<p>eligibility was fixed vide order no. 93 of 2013 dated 25-04-2013 and who had been promoted earlier as Professors under 5th CPC in Dec. 2007 through open entry.</p> <p>The Board of Governors (BOG) observed that an order had been issued vide no. 93 of 2013 dated 25-04-2013 in favour of three professors for their placement as professors under CAS. However the supporting documents, on the basis of which BOG issued above order, are not placed.</p> <p>Therefore the BOG desires that the case be returned to Faculty Grievance Committee to re-examine it in light of all supporting documents & come out with fresh recommendations.</p>	
	<p>2</p> <p>Grievances listed at GR-02, GR-03, GR-04 and GR-05 (regarding extending the benefit of CAS promotions to the faculty members from the due date of eligibility notionally without any financial benefit).</p> <p>The BOG examined the provision 4(q) of MHRD circular issued vide F. No. 33-7/2011-TS.III; dated 14-03-2012, which provides for the arrangement in the cases where CAS interviews were not conducted for three (03) years or more and which reads as under:</p> <p><i>"All Institutes shall strive to conduct annual selection processes regularly. In case of Institutes that have not conducted CAS interviews for 3 years or more, Selection Committees may, as a onetime measure, examine scholastic contribution of internal candidates made after the last interview and recommend a salary and AGP they would have earned now, had the</i></p>	<p>The recommendations of the Scrutiny and Selection Committees with regard to dates of eligibility for CAS upgradations had not been made available to the Grievance Committee. After examining the reports of internal scrutiny committee and recommendations of selection committees, following was observed:</p> <p>(a) Internal scrutiny committee has correctly recorded the dates of eligibility for CAS upgradations and the same had been placed before the selection committees.</p> <p>(b) Selection committees have given the recommendations for CAS promotions / upgradations as 'UNDER RULES' from effective dates.</p> <p>In light of above, it was decided to put the new facts before the Board of Governors again for their consideration and approval for allowing correcting and refixing dates of eligibility of faculty</p>

	<p><i>Selection Committee met at the appropriate time".</i></p> <p>T The BOG observed that the selection committees in the cases of Faculty mentioned under BOG-05-(GR-02 to GR-05) have not carried out the exercise as mentioned in previous paragraph. As the CAS was held in 2007 & thereafter it was conducted in 2013 only, therefore BOG observed that the above mentioned provision 4(q) of MHRD circular may be used. This will call for constitution of Selection Committee as per statutory provisions and relevant MHRD circulars. ,</p> <p>The representative of MHRD informed that the term of visitor nominees has already expired. Therefore Board decided that MHRD may be asked to expedite the matter and issue the valid list of visitor nominees.</p> <p>In a similar matter, MHRD representative has stated that CAS cannot be done at this point in time. However it was brought to the notice of BOG that in all these cases one time CAS process, as desired by MHRD vide communication F. No. 33-7/2011-TS.III; dated 14-03-2012, stands already completed and orders issued way back in 2013 as these cases belong to the period prior to 30th April 2013 and only date of eligibility needs to be re-fixed by selection committee.</p> <p>Board decided that MHRD may also be requested to allow application of provision 4(q) of MHRD circular issued vide F. No. 33-7/2011-TS.III; dated 14-03-2012</p>	<p>members.</p>
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	<p>to cases prior to 2007 to be able to remove the anomalies of this period. The reason stated is that prior to 2007 NIT Srinagar conducted CAS in year 2001 and thus there was a gap of six year intervening period in between two subsequent CAS interviews. The BOG further decided that the dates of eligibility thus recommended by the said selection committee, for each case, shall be submitted for approval to be granted by Chairman BOG, for issuance of orders.</p>			
	<table border="1"> <tr> <td>3</td> <td> <p>GR-06, GR-07, GR-08 and GR-09 (regarding: (1) grant to promotion from date of eligibility and (2) consideration of 2nd selection Committee recommendations). The BOG observed that these cases also require a review of the dates of effect given to the CAS up-gradations. The BOG decided that the same process as recommended in (2) above be followed for grant of CAS promotion from dates of eligibility. Thereafter, the sealed envelopes in their cases be opened by the Chairman BOG for implementation.</p> </td> </tr> </table>	3	<p>GR-06, GR-07, GR-08 and GR-09 (regarding: (1) grant to promotion from date of eligibility and (2) consideration of 2nd selection Committee recommendations). The BOG observed that these cases also require a review of the dates of effect given to the CAS up-gradations. The BOG decided that the same process as recommended in (2) above be followed for grant of CAS promotion from dates of eligibility. Thereafter, the sealed envelopes in their cases be opened by the Chairman BOG for implementation.</p>	<p>The recommendations of the Scrutiny and Selection Committees with regard to dates of eligibility for CAS upgradations had not been made available to the Grievance Committee. After examining the reports of internal scrutiny committee and recommendations of selection committees, following was observed:</p> <p>(a) Internal scrutiny committee has correctly recorded the dates of eligibility for CAS upgradations and the same had been placed before the selection committees.</p> <p>(b) Selection committees have given the recommendations for CAS promotions / upgradations as 'UNDER RULES' from effective dates.</p> <p>In light of above, it was decided to put the new facts before the Board of Governors again for their consideration and approval for allowing correcting and refixing dates of eligibility of faculty members.</p>
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4	<p>GR-10 regarding: (Counting of continuous previous Service of Mr</p>			

		<p>Shabir Ahmad Sofi, Assistant Professor (PB3/GP6000 - Equivalent to Pre-revised Lecturer), rendered at NIT Srinagar EDP cell as Research Assistant and at KITE Polytechnic as Lecturer).</p> <p>The BOG did not accept the recommendation.</p>	No action called for.
	5	<p>GR-11 regarding Counting of previous Adhoc Service of Dr G R Khan rendered at University of Kashmir from 01-04-1991 to 30-04-1993 for service and seniority benefits.</p> <p>With regard to this case, it is observed that counting of Adhoc Service for CAS promotion was provided in the UGC/ AICTE rules, subject to fulfillment of certain conditions. As the conditions stipulated in UGC/ AICTE rules were being fulfilled, the Faculty Grievance Committee has accordingly recommended the case. This recommendation is also consistent with the earlier BOG appointed committee in this case. The BOG thus decided to accept the recommendation of the Faculty Grievance Committee even as the MHRD representative was opposed to it.</p>	Concurrence of MHRD being sought.
	6	<p>GR-12 and GR-13 regarding counting of previous continuous Adhoc Service of Dr Tanveer Jalal, Associate Professor, Mathematics Department and Dr. Tabassum Ara, Associate Professor, Chemistry Department rendered at University of Kashmir. BOG accepted recommendations in these cases as-well since these are of similar nature as GR-11.</p>	Concurrence of MHRD is being sought.
	7	GR-14 regarding request of Dr	

		<p>Tanveer Jalal, Associate Prof (PB4/AGP9000) for release of increments for the teaching service rendered outside the country at Yanbu Industrial College, Kingdom of Saudi Arabia during the period from 01-10-2010 to 30-09-2012.</p> <p>The case may be brought in the next board meeting along with all the supporting documents related to the other Faculty Members who were granted increments for such teaching service/ research work done.</p>	<p>Item will be put up in the next BOG meeting.</p>
	8	<p>GR-15 regarding Request of Dr. M. Ashraf Shah for treating period with effect from 20-06-2011 to 03-10-2011 as active service period and release of salary for the said period.</p> <p>The BOG did not accept the recommendation.</p>	<p>No action called for.</p>
	9	<p>GR-16 and GR-17 regarding Consideration of Cases for upgradation under 6th CPC-CAS with effect from date of eligibility (a) from AGP 6000 to 7000, (b) from AGP 7000 to 8000 and (c) from AGP 9000 to 10000.</p> <p>MHRD representative explained to the Board that MHRD had sought an advice of law Department in the matter. The opinion of the law department has been already conveyed to the Institute wherein it is mentioned that the matter is pending before the Supreme Court of India.</p> <p>However during deliberations it was brought to the notice of Board that these cases are relevant to the period prior to 30th April 2013 (the cut-off</p>	<p>The recommendations of the Scrutiny and Selection Committees with regard to dates of eligibility for CAS upgradations had not been made available to the Grievance Committee. After examining the reports of internal scrutiny committee and recommendations of selection committees, following was observed:</p> <p>(a) Internal scrutiny committee has correctly recorded the dates of eligibility for CAS upgradations and the same had been placed before the selection committees.</p> <p>(b) Selection committees have given the recommendations for CAS promotions / upgradations as 'UNDER RULES' from effective dates.</p> <p>In light of above, it was decided to put the new facts before the Board</p>

		<p>date fixed by MHRD for implementation of CAS promotions).</p> <p>In view of this, BOG decided that MHRD be requested to look into the matter a fresh and get legal opinion of Solicitor General of India for seeking the necessary relief, with regard to the above matter, from the Hon'ble Supreme Court, so that the Institute is in a position to address the long pending grievances of the deserving faculty. This is necessary for resolving anomalies of period prior to 30th April 2013.</p> <p>The BOG further decided that since the instant cases are similar to cases mentioned under BOG-05-(GR-02) and hence once allowed by MHRD, the cases can be treated on the analogy of (1) above and the dates of eligibility thus recommended by the said selection committee, for each case, shall be submitted for approval to be granted by Chairman BOG, for issuance of orders.</p>	<p>of Governors again for their consideration and approval for allowing correcting and re-fixing dates of eligibility of faculty members.</p>
	10	<p>GR-18 regarding <i>counting of service rendered abroad</i>.</p> <p>The matter was discussed and the BOG did not accept the Plea of concerned Faculty Members.</p>	<p>No action called for.</p>
Item No. BOG-93/06	To consider the proposal of ACoFAR Committee for mapping of existing faculty under Four Tier system.		
Resolution No. 06/93	<p>The BOG observed that RR's for 4-Tier structure have been approved by Council of NIT's and as such the proposal of any modification will require approval of the Council.</p> <p>As such the proposal needs to be submitted</p>		<p>In view of final revised RR's no action called for.</p>

	<p>for consideration of the Council through its Standing Committee. During the discussions Board was informed that the earlier recruitments have been made as per qualifications prescribed in previous schemes circulated by GOI wherein recruitments have been done with M. Tech as well as B. Tech qualifications. In view of this it is therefore justified to incorporate modifications in the present RRs of 4-tier faculty structure so that a fair chance of upgradation is made available to the existing faculty with M. Tech qualifications at lower level cadres. It was also observed that NIT Srinagar has been working under disadvantageous locational and other constraints. The BOG thus resolved as under:</p> <p>The proposal is again studied by the same committee which may also explore the possibilities of obtaining feedback from faculty of other NIT's. The proposal be reframed on the basis of feedback and the said special locational and other constraints facing NIT Srinagar. Further options are included with proper weightage for candidates with M.Tech qualifications and teaching experience.</p>	
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Table B.10.1.3q

To record action taken report on the decisions of 92nd Board of Governors meeting, held on June 03, 2016 at 03.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.

BOG-92/01	To confirm the Minutes of the 91 st Board of Governors meetings of the Institute held on April 11, 2016 at 02.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.	
Resolution No. 01/92	The minutes of the 91 st meeting of the Board of Governors were confirmed with inclusion of comments received from Mr. S. P. Goyal, Joint Secretary (TEL), MHRD, and Department of Secondary & Higher Education.	Needful done.
BOG-92/02	To record action taken report on the decisions of 91 st Board of Governors meeting, held on April 11, 2016 at 02.30 p.m. in the Committee Room of the National Institute	

	of Technology Srinagar.	
Resolution No. 02/92	Record reported.	No action called for.
BOG-92/03	To record report on nomination of two faculty members on the Board of Governors of the Institute as per NIT Act 2007.	
Resolution No. 03/92	Record reported.	No action called for.
BOG-92/04	To consider the nomination of the Board of Governors on the Finance Committee as per the rules of First Statutes under the National Institute of Technology Act, 2007.	
Resolution No. 04/92	Prof. Rajinder Ambardar, Professor, Metallurgical & Materials Engineering department is nominated as member on the Finance Committee from BOG members.	Orders issued.
BOG-92/05	To consider the request of the Mr. Mohammad Farooq Mir, Assistant Librarian to fix the superannuation age in his favour as 62 years.	
Resolution No. 05/92	<p>The matter was discussed and it was noted that :</p> <p>a) The BOG in its 91st meeting after considering the report of the constituted committee decided to refer the matter to MHRD for their opinion.</p> <p>b) However, MHRD order [F.No.5-3/2012.TS-III dated 31-01-2013 and F.No.3-4/2013-TS dated 12-07-2013 (copies enclosed)] allows granting the benefit of age of superannuation as 62 years in favour of Asstt. Librarians subject to fulfillment of qualification as prescribed by the UGC.</p> <p>c) As per UGC notifications issued vide its order No. F.3-1/94(PS)-7 dated 22-09-2006 candidates having M.Phil. and Ph.D. are exempt from NET. Since Mr. Mohammad Farooq Mir has M.Phil. qualification and as such he is exempted from the NET qualification. In view of this, no relaxation in qualification is required in case of the candidate as he possess M.Phil. qualification.</p> <p>d) Mr. Farooq is therefore entitled to the benefit of superannuation of at the age of 62 years as per the mentioned MHRD order.</p> <p>e) MHRD may be informed of the above and necessary orders for giving the benefit to Mr Farooq be issued thereafter.</p>	
BOG-92/06	To consider the report of the Fact Finding Committee of the Institute.	
Resolution No. 06/92	The report submitted by Chairman of the Committee Prof. R. Ambardar in a sealed envelope was opened in the meeting with permission of the Chair and thereafter it was	It was planned to implement these decisions from

<p>deliberated upon thoroughly. The recommendations given by the committee at page no. 18 and 19 were considered one by one and following decisions taken in respect of each recommendation:</p> <ol style="list-style-type: none"> 1. Confidence building: It was decided that interaction with students must be enhanced in a structured way and following ways be adopted for the same: <p>The existing clubs of students be used for interaction by the administration periodically for a review of the activities and issues. This should be done atleast twice in one semester. A lunch or dinner is arranged once in each semester where students and faculty would be together.</p> <p>The HODs must organize an interaction with the students of each class once in a month. They may take alongwith one or more other faculty members who are not associated with that class.</p> <p>Saturdays must be utilized in curricular activities through clubs and departments.</p> <p>Sports activities should be increased.</p> 2. The departments must publicize the procurements made or procurements under process for laboratory development and other activities in the department through the Institute website and also by a departmental newsletter, managed by students under supervision of faculty. 3. In order to attract more faculty members / officers to take up proctorial duties, the benefits for the same needs to be enhanced but simultaneously it needs to be conveyed that no staff member can decline any assignment given to him. 4. The Wardens shall submit a report of their periodic visits to the hostel and interaction held with the hostel residents to the Director every fortnight. 5. Since the class representatives are already in place, the departments should formalize interaction with these representatives and report of interaction must be kept on record. 6. The BOG observed that since the FIR is understood to be against unknown persons as such no discussion is required as this stage. 7. The evaluated answer script of the major examination must be got signed by the student after he goes through it. 	<p>autumn 2016 session which has unfortunately got delayed due to the situation in the valley.</p>
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	<p>They must also record that he has received back the Minor exam scripts.</p> <p>8. Heads of the Departments must ensure that lower semesters are taught by senior faculty members.</p> <p>9. A booklet containing hostel rules and regulations and other information must be made available to every student at the time of admission in the Institute. This shall be ensured by the Dean Students Welfare.</p> <p>10. The Institute must organize motivational and behavioural lectures by professional and eminent persons for the students in a structured manner under extracurricular activities.</p>									
BOG-92/07	To consider the framing of modalities for constitution of a Students Council.									
Resolution No. 07/92	The BOG after detailed deliberations found that the model of Student Council at IEST Shibpur may be adopted by the Institute. However, before implementation, the model may be studied by a Committee including student nominee also for any changes that may be required.									
BOG-92/08	To consider the representations of the students for introduction of NCC in the Institute.									
Resolution No. 08/92	Approved. The programme details shall be worked out by the Institute for the same.									
BOG-92/09	Action taken on the decisions of the meeting held on 19-04-2016 in Delhi with student representatives									
Resolution No. 09/92	<p>The Director, Prof. Rajat Gupta presented the action taken in respect of this item as detailed below:</p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Decision</th> <th>Action taken</th> <th>BOG order</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>A new Committee for students Grievance Redressal which has been constituted with two external members will do the fact finding now and its Report is likely to be submitted by</td> <td>Report already submitted and considered by BOG.</td> <td>Orders are recorded in item no. BOG-92/06.</td> </tr> </tbody> </table>	S.No.	Decision	Action taken	BOG order	1	A new Committee for students Grievance Redressal which has been constituted with two external members will do the fact finding now and its Report is likely to be submitted by	Report already submitted and considered by BOG.	Orders are recorded in item no. BOG-92/06.	Action initiated / completed as per the BOG orders.
S.No.	Decision	Action taken	BOG order							
1	A new Committee for students Grievance Redressal which has been constituted with two external members will do the fact finding now and its Report is likely to be submitted by	Report already submitted and considered by BOG.	Orders are recorded in item no. BOG-92/06.							

	15th may, 2016.			
2	BOG to consider the report and formation of students council and its modalities.	Considered by BOG on 03-06-2016.	Orders are recorded in item no. BOG-92/07.	
3	BOG meeting likely to be held within 20th of May as per the convenience of Chairman.	BOG meeting was scheduled on 27-05-2016 but had to be deferred and was held on 03-06-2015.	No orders required.	
4	Optional external evaluation for minor one on written request and irrevocable basis.	Students were informed to give option through written notice but no one opted.	Record reported.	
5	Enhancement of medical facilities within 3-4 months.	Staff engagement is near finalization after advertisement and scrutiny. Equipment supply orders issued.	Record reported.	
6	Prefab two hostels having 80 rooms and prefab 15 class rooms likely to be completed within 6 months.	Work is going on satisfactorily.	Record reported.	

7	Some medical claims already borne by the Institute and those submitted the bills will also be reimbursed.	Reimbursement made on all claims.	Record reported.
8	Food and fruit corner in the campus to be installed.	N.I. T. issued and these facilities will be soon operational.	BOG ordered to make these operational by 30-06-2016.
9	Encroachment of NIT land has already been taken up, however it will be vigorously pursued with State Government.	Matter already taken up with D. C. Srinagar.	BOG advised to write to Commissioner / Secretary, Higher Education of J&K Government also.
10	All National festivals to be celebrated.	Implemented.	Record reported.
11	Demands relating to improved facilities in the hostels will be expeditiously looked into.	System fast tracked.	Record reported.
<p>The BOG advised that periodic reviews must be made on these issues and students taken into confidence about these during interactions.</p>			

Table B.10.1.3r

To record action taken report on the decisions of 91st Board of Governors meeting, held on April 11, 2016 at 02.30 p.m. in the Committee Room of the National Institute of Technology Srinagar.

BOG-91/01	To confirm the Minutes of the 90 th Board of Governors meeting of the Institute, held on December 30, 2015 11.45 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.	
Resolution No. 01/91	Confirmed with inclusion of the comments received from Mr. S. P. Goyal, Joint Secretary, MHRD, New Delhi.	No action called for.
BOG-91/02	To record action taken report on the decisions of 90 th Board of Governors meeting, held on December 30, 2015 11.45 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.	
Resolution No. 02/91	Record reported. The following is instructed: 1. A quantified report of the action taken be submitted in next meeting of BOG in case of resolution no. 10/90. 2. In case of item no. BOG-90/11, it was noted that permission for these structures has been granted as G+2 as per existing norms. However the permission for G+5 to NIT Srinagar has been assured. It was thus advised that the grant of permission as G+5 from the concerned authority needs to be pursued vigorously. 3. Mr. Firdous Ahmad Wani, Registrar who is on deputation be informed to join back the Institute as the regular Registrar availability is very essential given the work load of the post.	1. To be placed on the table. 2. The Director met Hon'ble Chief Minister, J&K regarding the issue who assured to expedite the matter for grant of approval. 3. Will be intimated of the decision after confirmation of minutes of 91 st meeting.

BOG-91/03	To record report on the action taken by the Chairman, BOG in having approved engagement of temporary faculty for Spring Session 2016 against the vacant faculty positions.	
Resolution No. 03/91	Report recorded.	No action called for.
BOG-91/04	To record report on the stoppage of sitting fee amount to the officials of Ministry / attached Institutions for attending the meetings of Board of Governors, Finance Committee and BWC etc.	
Resolution No. 04/91	Report recorded.	No action called for.
BOG-91/05	To consider the recommendations of the constituted Committee to fix the superannuation age of Mr. Mohammad Farooq Mir, Assistant Librarian as 62 years.	
Resolution No. 05/91	In view of the recommendations of the committee at para (2) of their report, it was decided to refer the matter to MHRD for their opinion.	Matter is resubmitted to BOG in view of the fresh representation of the person and orders of Chairman, BOG on it.
BOG-91/06	To consider the recommendations of the constituted Committee with regard to leave entitlement to Adjunct Faculty in the Institute.	
Resolution No. 06/91	Since adjunct faculty is not a regular staff, earned leave is not admissible.	Notified for needful.
BOG-91/07	To consider the report of the committee constituted to examine the case of Dr. G. R. Khan.	
Resolution No. 07/91	Mr. S. P. Goyal, Joint Secretary, MHRD and member BOG, desired that copy of the minutes of Selection committee of his engagement in University of Kashmir may be obtained and put up at the next meeting of Board of Governors for approval of the case.	University of Kashmir is being approached.

BOG-91/08	To consider the two orders of Hon'ble High Court of J&K in matters related to Career Advancement Scheme (CAS).	
Resolution No. 08/91	The cases are pursued. However the grievances of faculty be fast tracked so that such cases do not arise or at least are minimized. It was strongly pleaded by the Institute administration that the service interests of the existing faculty needs to be protected which otherwise would lead to a non-congenial environment as the affected faculty feels disgruntled which is not a healthy situation. The BOG noted with concern that there is need to address the grievances within the frame work of rules so that the faculty morale is boosted which is very essential for the development of the Institute.	The Grievance Committee for faculty has met twice recently and is scheduled again in June 2016 to give its final report.
BOG-91/09	To consider the issues discussed in the brain storming session held on 10-04-2016 for appropriate advice and orders.	
	Item withdrawn.	No action called for.
BOG-91/10	To consider termination of service as Technical Resignation in favour of Prof. R. K. Wanchoo, former Director of the Institute.	
Resolution No. 10/91	It was decided to refer the case to MHRD.	Case will be referred to MHRD after confirmation of the minutes of 91 st meeting.
BOG-91/11	To consider the minutes and recommendations of the Finance Committee made at its meeting held on 11-04-2016 at 10.30 a.m. in the Committee Room of the NIT Srinagar.	
Resolution No. 11/91	Record reported on the minutes and the recommendations are approved.	No action called for.
BOG-91/12	To consider the recommendations of the Senate made at its meeting	

	held on 08-04-2016 in the NIT Srinagar, Hazratbal Kashmir.	
Resolution No. 01/91	Record reported on the minutes of the Senate meeting. For granting of PDF, modalities from the IITs may be obtained and put up in the next BOG meeting for approval.	The details from IITs have been sought and shall be placed in next meeting of BOG.

Table B.10.1.3s

To record action taken report on the decisions of 90th Board of Governors meeting, held on December 30, 2015 11.45 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.

BOG-90/01	To confirm the Minutes of the 89 th Board of Governors meetings of the Institute, held on September 28, 2015 11.00 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi.	
Resolution No. 01/90	Confirmed. The modifications incorporated in the minutes of the Finance Committee meeting dated 28-09-2015 shall also get included in these minutes.	Needful done.
BOG-90/02	To record action taken report on the decisions of 89 th Board of Governors meeting, held on September 28, 2015 11.00 a.m. in the NIT Transit House, Safdarjung Enclave, New Delhi	
Resolution No. 02/90	Report recorded alongwith the following decisions: In case of resolution no. 04/89 regarding Senate item 20/07 i.e. NIT Srinagar distinguished Alumni Award, it was decided that two awards shall be presented every year during the Alumni Meet and the constituted committee shall identify the awardees accordingly.	Orders noted.
BOG-90/03	To record report on the action taken by the Director in having approved engagement of two Electricians on contractual basis in the P&D Wing of the Institute.	

Resolution No. 03/90	Ratified.	No action called for.
BOG-90/04	To record report on the conduct of DASA 2016 by NIT Srinagar.	
Resolution No. 04/90	Report recorded.	No action called for.
BOG-90/05	To record report on the action taken by the BOG, BOG in having approved continuation of Mr. M. M. Shawl and Mr. P. L. Saproo.	
Resolution No. 05/90	Report recorded. However, the advice of IFD may be sought so that it is ensured that there is no scope for errors in calculation of monthly consolidated emoluments in such engagements.	Order noted.
BOG-90/06	To ratify the action taken by the Chairman, Board of Governors in having authorized the Director to constitute the Departmental Visiting Committees.	
Resolution No. 06/90	Ratified.	No action called for.
BOG-90/07	To ratify the action taken by the Chairman, Board of Governors in having approved composition of a Committee for External Review.	
Resolution No. 07/90	Ratified.	No action called for.
BOG-90/08	To approve the minutes of Selection Committee of the Trainee Teachers	
Resolution No. 08/90	Recommendations of the Selection Committee of the Trainee Teachers are approved. Needful may be done so that the selected candidates can join IIT Delhi as Ph.D. scholars for the January 2016 session after submission of prescribed bond	Needful done. 08 Trainee Teachers have joined IIT Delhi w.e.f. January 2016, after completion of the formalities.

	<p>which has already been vetted by the Standing Counsel of the Institute. The maximum duration is 07 years which has been confirmed from IIT Delhi and included in the Bond.</p>	
BOG-90/09	<p>To consider the report of the Committee for mapping under Restructuring of Non faculty staff</p>	
Resolution No. 09/90	<p>The BOG noted that the proposal has been circulated to all the members as per the decision in the previous meeting. However, while no comment was received, Prof. Rather pointed out certain errors in the proposal during discussion. Chairman, BOG also observed that the Restructuring and the corresponding Mapping proposal is important requiring great care inasmuch as the structure / positions / posts proposed must take into account needs of the Institute in the foreseeable future. Further, mapping / deployment of the existing staff against the proposed structure / positions has to be done as per the prescribed rules ensuring at the same time that there is no or minimal possibility of any anomalies arising as a result of the exercise. It was, therefore, decided that the Director should get this proposal examined / reworked out by a small Group / Committee comprising Prof. G. M. Rather, member BOG and others. The concerned staffs from Personnel Department of the Institute require providing necessary assistance to this Committee and in</p>	<p>The proposal alongwith the report of the Committee has been approved by the Chairman, BOG and implemented accordingly.</p>

	fact, being actively involved in this exercise. Upon satisfying himself with the report of this Committee, the Director can put it up to the Chairman, BOG for final approval for implementing the same.	
BOG-90/10	To consider the report of the External Review Committee.	
Resolution No. 10/90	The BOG congratulated the Institute administration and staff for having succeeded to have the external review done on time. The BOG advised to take necessary steps for implementing suggestions of the external review report.	Necessary steps have been initiated.
BOG-90/11	To consider grant of in Principle approval for construction of two new multi storied buildings as per approved Master Plan.	
Resolution No. 11/90	<p>During the presentation by Dean P&D, it was revealed that at present as per LAWDA norms the building permission is restricted to G+2 but the proposals of the Institute prepared by CPWD are for G+5 blocks. It was further informed that the Government of J&K Town Planning Department is working on the revised Master Plan of Srinagar City wherein a provision for permission for G+5 type structures is envisaged.</p> <p>Based on these facts the BOG:</p> <p>a) granted in-principle approval for the following two works as G+5 structures through CPWD subject to the permission by the concerned authorities:.</p> <p>Construction of Academic Block at an estimated cost Rs.</p>	LAWDA has granted permission for G+2 structures at present but also intimated that as per revised Master Plan of Srinagar city, G+5 structures are being proposed for grant of permission. Accordingly the revised proposals have been framed and are being considered in the BWC meeting scheduled on 07-04-2016, the recommendations thereof will be placed in meeting.

	<p>1,58,45,12,000/-.</p> <p>Construction of Multi facility Block at an estimated cost Rs.75,98,42,300/-.</p> <p>b) In case the permission of G+ 5 proposals is not granted the proposal shall be revised in terms of the cost of estimate and resubmitted to the BWC for fresh approval for the revised proposal.</p>	
BOG-90/12	To consider the report on the activities of the Innovation, Incubation and Entrepreneurship Development Centre (IIEDC).	
Resolution No. 12/90	<p>The BOG noted with appreciation the steps that have been taken by the Institute under the Centre. It was advised that the Vision and Mission statement should include Incubation very prominently. It was advised that the activities should be pursued as per the Vision and Mission statement and collaboration with similar setups in the country should be explored very effectively. Further, it was advised to publicize the activities undertaken by this centre and a quarterly or six monthly News-letters may be printed by the centre for this purpose in addition to other mediums of publicity.</p> <p>Further BOG agreed in-principle to the proposal of setting up of an independent Incubation Centre to support the industries, entrepreneurship and start up in the following areas and advised for preparation of a DPR with help and involvement of an appropriate outside agency, if required:</p>	<p>Action as per the decisions is underway.</p> <p>He Hon'ble Chairman, BOG reviewed the progress in this regard during his visit to the Institute on 28-03-2016</p>

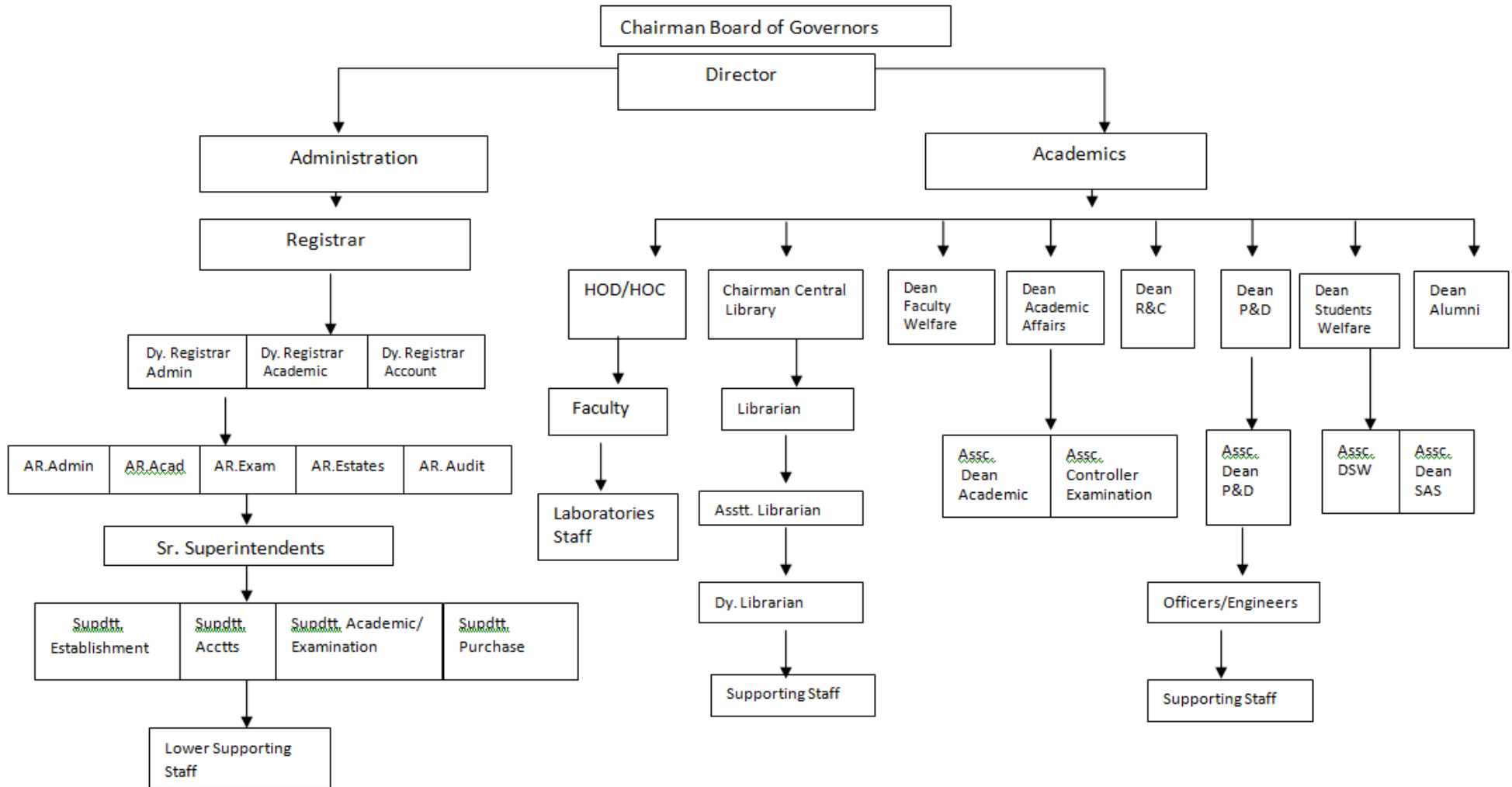
	<p>Mechanical Engineering oriented activities</p> <p>Chemical Engineering oriented activities</p> <p>Civil Engineering oriented activities</p> <p>Electronics & Comm. Engineering oriented activities</p> <p>Electrical Engineering oriented activities</p> <p>Information Technology oriented activities</p>	
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Table B.10.1.3t

10.1.4. Decentralization in working and grievance Redressal mechanism: (5)

10.1.4. (A) Organizational Structure

Organizational Structure of NIT Staff



Decentralization in Working: Faculty Development is delegated to the Dean Faculty Welfare:

- Students' Academic Activities and Examination is being looked after by Dean Academic Affairs who further is assisted by Associate Dean Academics and Associate Dean Examination.
- Developmental works of the Institute is being looked by Dean Planning & Development who is being assisted by Associate Dean.
- Training and Placement is delegated to Dean Alumni and International Affairs.
- The Students Activities, Hostels, Security is being looked after by Dean Students Welfare.
- Research and Consultancy of the Institute is being looked after by Dean Research and Consultancy.
- Office Administration and other matters are being looked after by Registrar.
- The Departments and Centres are being looked after by Heads of Departments and Heads of Centres.

All the above arrangements report to the Director of Institute in their day- to-day official activities and assignments.

10.1.4 Mechanism and Composition of Grievance Redressed system.

The Institute receives grievance both online and off line. The online grievances are addressed through online mode after obtaining the relevant information for concerned quarters. The offline grievances are also responded through surface mail to the aggrieved parties.

Further for grievance Redressal of teaching and Non-Teaching staff committees are constituted to look into the complaints/ grievances from the aggrieved. The report of the grievance committee is forwarded to the Director for further necessary action and the corrective measures are taken. Following Grievance Committees have been constituted:

1. Grievance Committees:

- **For Faculty**

Prof. A. H. Mir	Chairman
Prof. A. A. Zargar	Member
Prof. Roohie Naaz	Member
Prof. S. A. Lone	Member
Dr. Nisar Ahmad Mir	Convener
- **For Non-Faculty**

Prof. A. M. Shah	Chairman
Professor Kashmir University	
Prof. A. A. Zargar	Member
Professor Electrical Engg. Deptt.	
Prof. G. M. Rather	Convener
Professor ECE Department	
- **For Students**

Dr. Abdul Liman	Chairman
Dr. Neyaz Ahmad Sheikh	Member

Dr. Atiqur Rehman	Member
Dr. M. A. Rather	Member
Er. Tanveer Rasool	Member

2. For Anti-Ragging Committee

Dr. Abdul Liman	Chairman
Dr. Neyaz Ahmad Sheikh	Member
Dr. Atiqur Rehman	Member
Dr. M. A. Rather	Member
Er. Tanveer Rasool	Member
Concerned HOD	Member
Medical Officer	Member
Dy. Registrar (Academics)	Member
Asstt. Security Officer	Member
Two Students Representatives	Member

3. The Internal Complaints Committee under the provisions of “The Sexual Harassment of Women at work place (Prevention, Prohibition and Redressal) Act 2013 is constituted as under for our Institute:

Prof. Roohie Naaz	Chairperson
Prof. CSE Department	
Prof. Nahida Tabasum	Member
Prof. Pharmaceuticals Sciences KU	
Prof. Babar Ahmad	Member
Prof. Mechanical Engg. Deptt.	
Dr. Kowsar Majid	Member
Associate Professor Chemistry	
Dr. Seemin Rubab	Member
Associate Professor Physics	
Mr. M. Y. Kuchay	Member
Section Officer Cash & Compilation	

10.1.5. Delegation of Financial Powers (5)

The Accounts of the Institute are in the name of Director. He is empowered to sanction the requisite amount of money/ proposes upto Rs. 25.00 Lacs beyond this amount the proposal needs to be approved by Chairman BOG. The financial Cheques /transactions are jointly signed by Director and the Registrar.

Further, the HOD's/HOC's are delegated to spend Rs. 15,000/- for purchase of consumables and repairs for smooth running of the departments/centers.

10.1.6. Transparency and Availability of Correct Information in Public Domain (5)

The Institute has a dynamic website and all the relevant information is placed on the Institute Website www.nitsri.ac.in for the information of Public.

10.2 Budget Allocation, Utilization and Public Accounting at Institute level.(15)

10.2.1. (A) Quantum of Budget Allocation for Three Years

(Rs. in Lacs)

Financial Year	Budget			Expenditure			Total Number of Students
	Non-Recurring	Recurring	Total Budget	Non-Recurring	Recurring	Actual Budget	
2017-18	6770.00	6320.00	13090.00	6302.00	8428.00	14730.00	
2016-17	3400.00	5500.00	8900.00	3395.00	6388.00	9783.00	
2015-16	2900.00	6500.00	9400.00	2635.00	5554.00	8189.00	

*Table B.10.2.1***10.2.2 Utilization of Allocated Funds (5)****A. Budget utilization for three years:**

Financial Year	Budget	Expenditure	Percentage of Utilization
2017-18	130.90 crores	147.14 crores	112.40%
2016-17	89.00	97.83 crores	109.92 %
2015-16	94.00 crores	81.89 crores	87.11%

Table B.10.2.2

The Funds allocated have been well utilized for:

- Developing lab facilities.
- Additional labs were setup.
- New equipments were added to different labs.
- Library and Internet facilities were improved.
- Maintenance of workshop and lab equipments.
- Training programs for faculty members and non-teaching staffs.
- Extracurricular activities of students.

10.2.3. Availability of Audited Statements on the Institute Website. (5)**A. Availability of Audited Statement on website**

The Audited statements for the last three years are available on the Institute Website

www.nitsri.ac.in.

10.3 Programme specific Budget Allocation, Utilization(30)**10.3.1. (A) Quantum of Budget Allocation for Three Years.**

(Rs. in Lacs)

Financial Year	Budget			Expenditure			Total Number of Students
	Non-Recurring	Recurring	Total Budget	Non-Recurring	Recurring	Actual Budget	
2017-18	6770.00	6320.00	13090.00	6302.00	8428.00	14730.00	
2016-17	3400.00	5500.00	8900.00	3395.00	6388.00	9783.00	
2015-16	2900.00	6500.00	9400.00	2635.00	5554.00	8189.00	

Table B.10.3.1a

Specific Allocation

Items	BUDGETED IN 2017-018	EXPENSES IN 2017-018	BUDGETED IN 2016-017	EXPENSES IN 2016- 017	BUDGETED IN 2015- 016	EXPENSES IN 2015 - 016
Laboratory equipment	98000000.00	97778000.00	160000000.00	152906000.00	90000000.00	85847000.00
Computer Software	25000000.00	24500000.00	45000000.00	4090000.00	500000.00	418300.00
Library	33500000.00	32500000.00	NIL	NIL	11000000.00	10246942.00
Maintenance And Spares						00.00
R&D						00.00
Training and Travel						00.00
Misc. Expenses*						00.00
Lab consumable	7000000.00	6903000.00	6000000.00	2065000.00	5000000.00	1151000.00
Total	16350000.00	161681000	2110000.00	169061000.00	106500000.00	97663242.00

Table B.10.3.1b

10.3.1.(B) Justification of Budget Allocated

- As per the requirement of Institute New Labs were established and New Equipments and accessories had to be procured.
- New Facilities were introduced for extension programmes of R&C Wing.
- Existing labs were upgraded and improved for ambience and facilities.
- Purchase of New Softwares and Renewal of Softwares already existing.

- Purchase of E-Resources, E-Books and E-Journals.
- Faculty members were encouraged to attend faculty development programmes.
- Trainings programmes for non-faculty staff were held for upgradation of soft skill.

10.3.2. Utilization of Allocated Funds:

Financial Year	Budget	Expenditure	Percentage of Utilization
2017-18	130.90 crores	147.14 crores	112.40%
2016-17	89.00	97.83 crores	109.92 %
2015-16	94.00 crores	81.89 crores	87.11%

Table B.10.3.2

The funds allocated have been well utilized for:

- Developing of lab facilities and upgradation of existing facilities.
- Purchase of equipments for different labs
- Library resources and internet facilities
- Workshop maintenance and lab consumables.
- Training of faculty and non-faculty.

10.4. Library and Internet (20)

10.4.1 Quality of leaning Resources

The NIT Srinagar library supports the Teaching, Research & and other related programmes of the institute. The Library has a good collection of documents that comprises of Books, Journals, Theses, Video cassettes, Learning Resources (LRs)& Compact discs in the field of Engineering, Science, Management, Literature & Humanities.

The library has computerized data of whole of its collection using **KOHA software** and is in the process of computerizing all its activities.

The library has a separate section for **SC/ST &OBC Students**.

Library Established in	1960
Library Members	3217
Number of Books	48575
Reprographic facility	Xeroxing
Data usage of the Library	70-80%

	(in terms of Books issued to faculty& students)
Annual Budget	3crore`
Timing during working days	8.45 am to12 pm
Timing on Sundays &Holidays	10am to 5pm

Table B.10.4.1a

Layout and Floor plan

Ground Floor

The ground floor houses the following important sections.

- Reading room
- Periodical section
- Circulation section
- Audiovisual Section
- Acquisition Section
- Stacks I
- Chairman, Library Committee's Room
- Librarian's room
- Office

First Floor

- Textbook & Reference section
- Stacks II

Second Floor

- Back Volume Section

Library Mission

- To promote the technical knowledge
- Generation and application of knowledge & resources
- Effective dissemination of knowledge.
- Library automation and networking for remote access of online electronic resources.
- Improve the library resources.
- Enhance the student experience.
- Build the digital research environment.
- Provide convenient and customized access to information Library Resources

The library has a wide range of resources on Engineering, Sciences, Humanities& Social Sciences.

Collection	Size (number)
Books	48575
Bund volumes of journals	10070
Video cassettes	496
Learning resources	36
Compact discs	273
Books in text book section	8024

Books in stacks section	40451
Books in SC,ST section	9898

Table B.10.4.1b

Year	Number of New Titles Added
2017-2018	164
2016-2017	1193
2015-2016	4680

Table B.10.4.1c

E-Library (Electronic/On-line resources/e-resource 2018)

E-library provides collaborative search of all type of e-resources/on-line resources such as e-journals and books

E-Books

Central library procured different type of e-books, online books for students and faculty via IP range in the campus. The different departments can also be access various type of e-books such as text books and reference books in the electronic form.

1. Wiley

Subjects Covered	URL	Total cost
Civil Engineering & Construction, Electronics &Electrical Engg, Computer Science &IT, Chemistry &Chemical Engg, Physics, Maths & Statistics &Mechanical Engineering.	onlinelibrary.wiley.com	\$88694

Table B.10.4.1d

2. Springer Nature

Subjects Covered	URL	Total Cost
Chemistry & Materials Science, Computer Science, Engineering, Mathematics &Statistics, Physics &Astronomy	link.springer.com/open url?genre=book&isbn=978-1-4471-6807-2	€52,759.20

Table B.10.4.1e

3. Elsevier

Subjects Covered	URL	Total Cost
Chemical Engineering, Chemistry ,Engineering, Materials Science, Mathematics,Physics & Astronomy, Computer Science	sciencedirect.com	\$102136

Table B.10.4.1f

4. Pearson

Subjects Covered	URL	Total Cost
Chemistry, Civil Engineering, Computer Science & IT, Electronic Telecommunication, Mathematics, Mechanical Engineering, Physics	lib.myilibrary.com	INR 15.64059

Table B.10.4.1g

E-Journals

E-Resources are accessible to our Institute through eShodhSindhu (eSS)

E-resources Subscription Period

ACM Digital Library	January2018toDecember2018
ASCE Journals	January2018toDecember2018
ASME Journals Online	January2018toDecember2018
Economic & Political Weekly	April 2018 to March 2019
Institute for Studies in Industrial Development	April 2018 to March 2019
JGatePlus(JCCC)	January2018toDecember2018
Oxford University Press	April 2018 to March 2019
Springer Link 1700 Collection+ Nature Journals	April 2018 to March 2019
Web of Science Lease Access	January2018toDecember2018

NDL e Resources

- | | |
|------------------------------|-------------------------------|
| 1. World E-Book Library | September 2017 to August 2018 |
| 2. South Asia Archives (SAA) | National Licensing |

URL<http://www.inflibnet.ac.in/ess/eres.php.?memID=357>

Back Files of Science Direct Journals from M/S Elsevier on the following subjects are now available from Vol.1, Issue1 up to the year 1994.

Subjects Covered	Year	URL	Total Cost
Engineering & Technology	Pre 1995	sciencedirect.com	\$193,874
Materials Science	”	”	
Chemical Engineering	”	”	
Computer Science	”	”	
Inorganic Chemistry	”	”	
Organic Chemistry	”	”	
Mathematics	”	”	
Business Management Accounting	”	”	

Table B.10.4.1h

Subjects Covered	URL	Total Cost
Science Direct (8 subject collection)	www.sciencedirect.com/	
IEEE/IET Electronic Library (IEL) online	http://ieeexplore.ieee.org/	INR 3109669

Table B.10.4.1i

BIS & ASTM Standards on our IP range

Subjects Covered	URL	Total Cost
BIS	http://standards.bsb.co.in/	INR 1248345.60(for 3 Years)
ASTM	http://compass.astm.org	INR 744420.44

Table B.10.4.1j

Services

Membership

All the students, faculty members, research scholars & administrative staff can register themselves for the membership of the library. The membership form is available at the circulation counter and the same is required to be attested by the Head of the Department/Section.

The number of books borrowed by users is as follows:

Category	Number of Books	Duration
Faculty	10	30 days
Research Scholar	5	15 days
Student	3	15 days
Supporting Staff	2	15 days

Text Book & Reference Section

The textbook and reference section remains open from 8.45 a.m.to 9.30p.m. on all working days and from 10.a.m. to 4.00 p.m. on weekdays & holidays. The books available in this section can be consulted in the library only.

Stacks section

The books available here are meant to be issued to the faculty, students, research scholars and other readers as per the criteria given in the library rules.

Video Library

The library has collection of video cassettes, CDs, & LR.s. They are kept in the audio visual section of the library. This section remains open on all working days from 8.45 AM to 5 PM.

Photo copying facility

The photocopying facility is provided to all students and faculty at subsidized rates.

Search

OPAC (Online public access catalogue)

Science Direct

E-Resources

Video library

Our Team

Prof. M S Mir.	Chairman Library Committee M 9469425113, shafi@nitsri.net
Dr. Mohammad Hanief	I/C Library M 9906763424 hanief@nitsri.net
Mr . M Farooq Mir	I/C Deputy Librarian Tel:9469804611 Farooqmir58@gmail.com
Technical Asstt. (SG)	Mrs Saymee M 9858943292 saymee786@rediffmail.com
Technical Asstt.	Mrs. Sabiya M 9596088779 sabiya786@gmail.com
Technical Asstt	Mrs. Tahira
Technical Asstt	Mr. M Y Rather
Assistant (SG)	Mr. Bashir A Kawoosa 9797073820 bashirkawoosa@gmail.com
Assistant(SG)	Mrs.Dilshada
Assistant(SG)	Mrs.Neelofar
Jr. Lib assistant	Mr. Shabir Ahmad Sheikh
Orderly	M Yousuf Mir
Orderly	Mr. Gh Mohammad Sheikh
Contractual	Four

Table B.10.4.1k

Library Organization

The Library is organized into the following functional Units:

- Acquisition Section
- Processing Section
- Periodical Section
- Circulation section
- Stacks I
- Text book & Reference Section
- Stacks II
- Reprographic Section
- Audio Visual Section
- Back Volume Section

Members of the Library Committee

- | | |
|------------------------|----------------------------|
| 1. Prof. M. S. Mir | Chairman Library Committee |
| 2. Dr. M. Hanief | I/C Library |
| 3. Mr. M. Farooq Mir | I/C Deputy Librarian |
| 4. Prof. B. A. Mir | Member |
| 5. Prof. M. F. Lala | Member |
| 6. Dr. (Mrs.) Rubab | Member |
| 7. Dr. Niyaz Ahmed | Member |
| 8. Dr. J. A. Bandy | Member |
| 9. Dr. JavidIqbal | Member |
| 10. Dr.(Mrs.) Farida | Member |
| 11. Dr. M. A. Rather | Member |
| 12. Dr. Atik ur Rehman | Member |
| 13. Dr. Shabir Ahmed | Member |
| 14. Dr. Ahsan Chesti | Member |

10.4.2 Internet

Name of the Internet Provider	NIC NKN; BSNL
Available Bandwidth	NIC NKN :1 GBPS (1:1) & BSNL: 250 Mbps
Wi-Fi Availability	YES
Internet access in labs classrooms library and offices of all departments	YES
SECURITY ARRANGEMENT	YES HARDWARE FIREWALL

Table B.10.4.2a

Wi-Fi Details

NIT Srinagar is a Wi-Fi enabled campus with its access controlled by hardware Firewall installed in Computer Service Centre and Wi-Fi access points in various departments including both Boys and Girls hostels.

Device	Department	Coverage
Dlink Access Points	Computer Service Centre(1)	50 Meters radius without obstructions

Dlink Access Points	Direction Office (2)	50 Meters radius without obstructions
Dlink Access Points	CSE Staff Room (1)	50 Meters radius without obstructions
Dlink Access Points	Training & Placement Cell (4)	50 Meters radius without obstructions
Dlink Access Points	IT Staff Room (1)	50 Meters radius without obstructions
Dlink Access Points	Humanities Department (1)	50 Meters radius without obstructions
Dlink Access Points	Physics Department (1)	50 Meters radius without obstructions
Dlink Access Points	Medical Unit (1)	50 Meters radius without obstructions
Dlink Access Points	Guest House (1)	50 Meters radius without obstructions
Dlink Access Points	Boys Hostels (92) Girls Hostels (15)	50 Meters radius without obstructions

Table B.10.4.2b

Security Details

S.No	Device	Function
1	Sophos Firewall (Hardware)	Security Controller
2	Quick Heal (Seqrite) Antivirus Software	Anti Virus

Table B.10.4.2c

ANNEXURES

NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR
Hazratbal, Kashmir-190006.



VISION DOCUMENT
2025

NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR,
HAZATBAL, KASHMIR.

CONTENTS

S.No.	Particulars	Page No.
1.	Introduction	319
2.	Vision/Mission/Goals	319
3.	Objectives	320
4.	Methodologies	321
5.	Output Indicators	322
6.	Identification of Technologies that NIT Srinagar likes to put thrust on	324
7.	SWOT Analysis	328
8.	Concluding Remarks	330
9.	Abbreviations Used	331
10.	Appendix-A Table-1a: Courses being offered Table-1b: Existing Laboratories Table-1c: Proposed New B. Tech. Courses Table-1d: Proposed M.Tech./M.Sc. Courses Table-1e: Proposed PG Diploma Courses. Table-1f: Proposed Centres to be opened. Table-1g: Additional Space Requirement for the Departments and Centres Table-1h: Proposal for consideration of establishment of New Campus.	331-337

ANNEXURE-I

INTRODUCTION:

India is one of the largest technical manpower producing countries of the world. India's vision to become a developed country by the year 2020 can only be achieved through creating income generating activities.

Technology is the means to creating income generating activities. It is the basis for creating wealth for elevating the socio-economic status of the people of a country. A nation can derive strength through development of technology. Technological strength depends upon: (i) *talented manpower*, (ii) *technology base (knowledge)* and (ii) *infrastructure for industrial growth*. A measured combination of these factors together with the availability of natural resources and a huge market provides a country opportunity for developing economic and social status, which ultimately generates a self-supporting prosperous society. India possesses all these

Educational institutes, especially those dedicated to Science & Technology, have to take the lead. A technical institute is one of the different wings of science and its vision/mission must aim at supplying quality technical manpower for implementing the vision and mission of the country.

NIT Srinagar will provide dedicated service for the fulfilment of the aspirations of individual as part of that of the nation as a whole. It will work to provide engineers and technologists who would be leaders in their field of work, participate in creativity, research, design, development and technology management in the country to meet global challenges to our society and industry. This unique endeavour will focus our effort towards the common goal and help in shaping the future of our country. NIT Srinagar will play a vital role in this endeavour by creating excellent resources and facilities for research and development as well as a large pool of highly trained engineers. It will contribute its share in converting India's large population from a liability into trained human capital.

Vision of NIT Srinagar

To establish a unique identity of a pioneer technical Institute for NIT Srinagar by developing a high quality technical manpower and technological resources that aim at economic and social development of the nation as a whole and the region in particular keeping in view global challenges.

Mission of NIT Srinagar

- (1) The broad mission of NIT Srinagar is to create a strong and transformative technical educational environment in which fresh ideas, moral principles, research and excellence nurture with international standards.
- (2) Technically educated and broadly talented engineers, future innovators and entrepreneurs, graduate with understanding the needs and the problems of the industry, the society, the state, and the nation.
- (3) We promise to inculcate the highest degree of confidence, professionalism, academic excellence and engineering ethics in budding engineers.

Goals

- i) *Providing Quality Education to the Students*
 - ✓ To offer effective teaching-learning to students.

- ✓ To provide the knowledge, skills and attitudes to UG and PG students necessary for their being able to be distinguished globally and socially responsible.
- ✓ To train the students to learn to meet changing needs due to rapid technological advancement, to offer society the necessary technology and to actively participate in all round socio-economic development programmes.
- ✓ To provide the best, relevant, reliable and high-quality education by focussing on need-based specific solutions.
- ✓ To provide the framework to develop the inherent skill in students, by taking initiatives for technology innovation skill in the students, through sincere and target based, dedicated efforts.

ii) *Generation of Infrastructure for Research Activities*

- ✓ To provide facilities, infrastructure, inspiration and resources to conduct meaningful research of social relevance along with development of indigenous materials, capacities and technologies.
- ✓ To act as centres of excellence in technical education catalysing absorption, innovation, diffusion and transfer of high technologies for improved productivity & quality of life at national and global level.
- ✓ To keep in consideration the needs of the region in regard to local needs, relevance, strength and limitations and provide community service.

Objectives

Effective Teaching-Learning & Research Environment

- ✓ To create an environment for effective teaching-learning by encouraging students and faculty to nurture their intellectual curiosity, and scientific and research temper.
- ✓ To increase research and consultancy activity, with options for incentives and encouragement, to motivate staff and students to actively engage in research activities in collaboration with industry and R&D Centres.

i) *Continuing Education Programs*

- ✓ To encourage organisation with participation of staff and students in in-house and outside training programs, seminars, conferences and workshops on continuous basis.
- ✓ To increase the number of continuing education programmes.
- ✓ To provide opportunities for continuous updating in the knowledge of faculty through faculty exchange from premier institutions and industries.
- ✓ To increase interaction with educational and other research institutes.

ii) Institute-Industry Linkage

- ✓ To increase Institute-Industry interaction and to generate strong linkage with industry.
- ✓ To up-grade, develop and transfer Technology.
- ✓ To exchange faculty and working personnel from industry.
- ✓ To encourage active participation of alumni in resource generation, planning and development.

iii) Institute–Society Linkage

- ✓ To provide society with necessary consultancy and training to solve local problems by organising community development programs.
- ✓ To create awareness on the consequences of Environmental Pollution.
- ✓ To increase demand and pay packages of the student.
- ✓ To encourage and train in development of entrepreneurship

Methodologies

i) Qualities and Conditions of Staff

- ✓ By imparting value education to all people, especially the engineering community of the country.
- ✓ Induction of highly qualified, talented, competent & motivated faculty, and trained & dedicated supporting technical and administrative staff.
- ✓ By improving in-service conditions of faculties and technical staff commensurate to that of the industry to attract best faculty and staff.
- ✓ By introducing award of merit, recognition and sabbatical leave to performing faculty and staff.
- ✓ Establishing excellent academic support facilities (laboratory, library, Internet etc.) required for good education on continuous basis.

ii) SWOT Analysis and Restructuring

- ✓ Identifying particular areas of technology needed based on SWOT analysis (examining the existing facilities).
- ✓ Identifying the problems of J&K.
- ✓ Reforming regulations and curriculum by introducing greater flexibility to courses.

- ✓ Introduction of IT-enabled management in all activities of institute.

iii) *Strengthening Research Oriented Activities*

- ✓ Submission of concrete proposals to funding agencies for necessary grant.
- ✓ Establishing/strengthening of R&D facilities in institute in collaboration with industries.
- ✓ Developing more research-oriented laboratories and centres.
- ✓ Involving students in innovative technology projects.
- ✓ Providing research & development oriented education.
- ✓ Creating national/international collaborative programmes.
- ✓ Introducing need based more number of UG, PG & research programmes.
- ✓ Establishing network-link amongst NITs for resource and expertise sharing.

iv) *Introduction of Monitoring and Control Mechanism*

- ✓ Introducing a regular monitoring and control mechanism by establishing procedures and methodologies for assessing outcome of all actions taken and taking appropriate actions, wherever required, for restructuring.

Output Indicators

i) *Q-Resource MP and Academic Environment*

- ✓ Increase in qualified (minimum PhD) & talented faculty.
- ✓ Increase in qualified technical staff.
- ✓ Increase in visits of adjunct/visiting faculty from industry.
- ✓ Lectures by distinguished professionals from industry and academic institutes.
- ✓ Exchange programs at national & international level.
- ✓ Increase in state of the art laboratories in cutting edge technologies.
- ✓ Meaningful use of class rooms and laboratories, equipped with latest tools.
- ✓ Increase in non-formal training to industry and other educational institute (Executive/staff development Programme).
- ✓ Increased utilisation of infrastructure facilities in terms of man-hours by sharing the facilities with the other academic institutions.

ii) *Infrastructure and Administrative Reforms*

- ✓ Development of state-of-the-art infrastructure in terms of building (offices, Lecture theatres, new laboratories, new departments and centres, hostels, faculty and staff residences), equipment, library, video conferencing & media centre, medical, road, electricity, water supply, sanitation, telecom and Internet facilities, security, recreational facilities, environment and ambience.
- ✓ Administrative reforms (MIS, Transparency and self-monitoring mechanisms, autonomy, well defined responsibilities & accountability, maintenance etc.).
- ✓ Establishment of industry sponsored chairs.
- ✓ Nurture entrepreneurs.
- ✓ Increase in resource generation through alumni, consultancy, fee etc.
- ✓ Increase in community services to payback to society.

iii) Research Activities

- ✓ Increase in participation in national and international conferences.
- ✓ Increase in faculty visit/training/collaborative ventures with industry, research organisations and other academic institutions of repute in India & abroad.
- ✓ Increase in research publication, patents and technology transfer to industry.
- ✓ Increase sponsored research projects and consultancy.
- ✓ Increase in Ph.D. and post-doctoral research.

iv) Upgradation of Library Facilities

- ✓ *Construction of new library building with adequate space.*
- ✓ *Modernisation of library facilities.*
- ✓ *Providing Independent robust internet connectivity.*
- ✓ *Creating facilities to access e-resources through internet.*
- ✓ *Creating facilities to access e-resources within the library.*
- ✓ *Development of sufficient manpower in the library.*
- ✓ *Completion of computerisation of the library.*
- ✓ *Digitization of rare references and theses.*
- ✓ *Improve Training of library staff.*

v) Boost in Academic Activities

- ✓ Increase in student strength at M. Tech. and PhD level (restructuring the existing programmes & introducing new programmes).
- ✓ Increase in foreign students' intake.
- ✓ Increase in degree programmes.
- ✓ Introduction of new innovative programs like Dual degree program, MS by research program.
- ✓ Increase in departments and centres of excellence.
- ✓ National and Global Accreditation Certification and licensing for global competitiveness as per GATS (Mode - 2 and Mode – 4).

Identification of Technologies That NIT Srinagar will put thrust on

Though NIT Srinagar has to keep pace with national and global trend in the development of technology, it has its own strengths and weaknesses, specific obligations and socio-economic responsibilities. NIT Srinagar needs to give greater impetus to all round development to reduce the gap in progress that has been created because of two decades of uncertainty. As a step forward in this direction, following thrust areas have been identified with Vision-2025 which is linked to major areas in advanced technologies, technologies with socio economic implications, strategic technologies and technologies to make J&K state self-reliant.

A) Agriculture and Food processing

i) Agriculture Bio- Technology

- High yielding crops & terminator gene
- High nutritional & medicinal value crops
- Food/commodities high shelf life and taste (Plant pathology)
- Highly tolerance & pest resistant crop
- New variety of agriculture produce (GM) and quality improvement

ii) Food and fruit processing, packaging & storage technology

- Packaging & transportation without damage
- Processing & healthy preservation without losing nutrient
-

B) Infrastructure (Social & Industrial)

i) Housing & Land development

- Low cost rural housing
- Smart and energy efficient urban housing
- High rise buildings
- Mechanized Construction & modular construction
- Earthquake resistant construction
- Secured demolition technology
- Non-invasive and quick geo-technical explorations
- GIS, GPS and Remote sensing
- Utilization of underground space
- Health monitoring of the structures
- Structural green building technology.

ii) Transportation

- High-speed (Rapid) surface & sub-surface transport
- Air transport and Airports

iii) Communication

- Wireless technology and network sensors
- Satellite & space (inter-planet) communication technology
- Global high speed data transfer
- Signal Processing
- Telemedicine

iv) Urban & Rural Planning and Management

- Solid waste management and utilisation
- Electronic & toxic waste management
- Water treatment
- Rain water harvesting, ground water recharging.
- GM bacteria for waste management.

v) Technology for Local and Regional Development

- Avalanche & Landslide studies
- Foundations on slopes
- Prevention of land erosion.
- Preservation of tourist attractions viz. Dal Lake etc.

C) Resource Management

i) Energy Engineering

- Sources: Hydro, solar, wind, thermal, nuclear, fuel cell
- Alternative sources and resources of energy
- Renewable organic (bio) fuel
- Energy storage devices
- Electric Power: Generation, Transmission and distribution
- Energy audit and loss minimization
- Development of Energy efficient technologies
- Sensor based use of energy appliances.

ii) Water Resource Management

- River linkage
- Irrigation canals
- Rain water harvesting and ground water recharge

iii) Environment, Ecology & Sustainability

- Environmental impact assessment and audit
- Macro engineering the environment and weather
- Weather forecasting
- Global warming
- Development of Eco-friendly (Green) technology
- Waste management

D) Disaster Mitigation & Management

- Earthquake.
- Flood & drought
- Widespread fire in forest or in man-made infrastructure
- Predictions and post disaster rehabilitation

E) Technology Management

- Education technology and distance learning
- Knowledge Management
- Technology development, transfer, dissemination and absorption
- Development of indigenous technology (substitute of imported technology)
- Entrepreneurship
- Sustainability in resource generation and technology development
- User-friendly and Safe Technology
- Research & Development Management

F) Development of Newer and Advanced Technologies

- Computational Fluid Dynamics
- Embedded technology and Real time Systems
- VLSI
- MEMS and NEMS
- Nano Technology & Bio-Nanotechnology
- Advanced sensors & Network sensors
- Application of Artificial Neural Network (ANN) & Fuzzy Logic.
- Performance Based Seismic Design.

G) IT & Services

- Internet and digital network services
- E-governance
- Technology empowerment of mass

- Net security
- Software development for CAD etc.
- Telemedicine.

SWOT Analysis

NIT Srinagar has identified its own thrust areas based upon its current strengths, capabilities, facilities, interests and future projections incorporating diverse needs and local conditions. A SWOT analysis is presented below for the NIT Srinagar while finalising its vision, mission, goals, policy guideline, strategies, action-plans, and expected outcomes, as stated on previous pages.

A) Strengths

i) Academic Sector

- Good quality faculty.
- Creamy layer of students.
- Full academic autonomy and university status.
- Adherence to academic calendar with regular academic sessions.
- Periodic updating of curriculum.
- Number of P.G. programmes offered.
- Well-equipped laboratories.
- Conducive ambience and well-endowed computational and academic infrastructural facilities.
- Good placement record.
- Developing countries' students come to NITS for higher studies.

ii) Non-Academic Sector

- Financial autonomy.
- Reasonably good funding.
- Good pay package for the staff.
- Brand image from more than 50 years of standing.
- Alumni in Senior/influential positions.
- Professional Board of Governors with administrative autonomy.

B) Weaknesses

i) Academic Sector

- Inadequate and insufficiently trained supporting technical staff.
- Inadequate sophisticated equipment and labs in the areas of emerging technologies & cutting edge disciplines for post graduate teaching and research.
- Inadequate educational technology facilities according to global norms.
- Low research and consultancy output due to inadequate research facilities.
- Teaching is curriculum centric rather than learning centric (Inadequate emphasis on problem solving, laboratory experimental design and simulation).

ii) Non-academic Sector

- Work culture is still driven by old REC legacy.
- Less than needed emphasis on overall personality development of student.
- Inadequate emphasis on entrepreneur skill development in students.
- Inadequate linkages with industry and community.
- Inadequate administrative skilled staff/officers.

C) Opportunities

i) Academic Sector

- Scope of providing world class education in cost effective manner.
- Increase in intake of UG, PG & PhD students as mandated by MHRD.
- Increase in research activities: PhD and sponsored research.
- Scope of establishing centre of excellence and advanced studies.
- To train technical supporting staff.
- International and national academic collaborations and joint ventures with industries.

ii) Non-academic Sector

- Boom in industrial development puts demand for quality technical manpower.
- MHRD's strong support for funds and autonomy.
- Scope of innovating new products/processes/designs and acquire patents.

- Scope of tapping Alumni experience; building corpus fund, developing labs, chair professorships, collaborative programs with universities/ industries etc.
- Increased interaction with industries.
- Tapping natural resources available in various parts of the country including different parts of J&K.

Threats

i) Academic Sector

- Lack of good faculty may permit mediocrity to overtake excellence.
- Overloading of faculties by Academic & Administrative activities results in the decrease in the pace of progress in research activities.

ii) Non-academic Areas

- More attractive opportunities outside NIT Srinagar, in terms of remoteness from the heart of country, tedious transportation facilities, pose a threat to attract and retain good faculty and technical staff.
- Lack of proper transportation facilities through Road/Rail resulting slower development of infrastructure at NIT Srinagar.
- Boom in self-financing institutions.

Concluding Remarks

Technical education has been the driving force in supporting industrial growth, creating healthy economic status, generating employment opportunity, eradicating poverty and all round development of society. NIT Srinagar has set its vision-mission'2025 with the aim of generating technically sound manpower, which will provide necessary technical support at both the national and international level. It is envisaged that there will be growing challenges to technical education in the coming years as global competition; technology advances, new markets etc. Shape the future. It is believed that this vision document will play the role of guideline towards fulfilling our common goal and in helping shape the future of the country.

J&K is lagging far behind the country's average development mark in almost all sectors: e.g., industrial growth, employment opportunity, transportation, education, economic condition, health etc. Being a technical institute of national importance, situated in the extreme north, NIT Srinagar would like to play a vital role in the upliftment of the quality of life of all sections of society of the region. Although a series of measures have been initiated by Government of India to implement various sponsored programmes, many more are needed to bring the general development status of this region to the level of the best in the mainstream. Therefore, NIT Srinagar has set its mission to provide cutting edge technology for this region by committing itself directly as well as indirectly to the needs of this region.

It may be pointed out that, at present NIT Srinagar has a scenic campus situated on the banks of the famous Dal Lake. The present land on which, it is built is 67 acres, which is far less than what is

required for fulfilment of the vision. Therefore, a proposal for establishment of an additional New Campus comprising of 250 Acres is already under process.

The details of the existing branches of studies, proposed advanced technologies, technologies with socio-economic implications, student intake etc. along with new infrastructures required up to 2025 for making National Institute of Technology Srinagar a centre of academic excellence are highlighted in *Appendix-A*, attached herewith.

Abbreviations Used

CE= Civil Engineering Department

EE = Electrical Engineering Department

ME = Mechanical Engineering Department

CSE = Computer Science and Engineering Department

ECE = Electronics and Communication Engineering Department

CHEM = Chemistry Department

PHY = Physics Department

MATHS = Mathematics Department

H & SS = Humanities and Social Science

IT=Information Technology

MME=Metallurgical & Materials Engineering

CHE=Chemical Engineering

APPENDIX- A

Courses being offered by Existing Departments

Sl. No.	Name of Departments	B. Tech. Courses	M. Tech./M.Phil. Courses
1	CE	Civil Engg.	1. Water Resources Engg. 2. Structural Engineering 3. Geo-Technical Engg. 4. Transportation Engg. & Planning
2	EE	1. Electrical Engg.	1. Electrical Power and Energy System
3	ME	Mechanical Engg	1. Mechanical System Design. 2. Industrial Tribology and Maintenance Management
4	CSE	Computer Science Engg	----

5	ECE	Electronics and Communication Engg.	1 Communication & Information Technology 2 Micro-Electronics
6	CHEM	Chemical Engineering	1.Chemical Engg.
7	MME	Metallurgical & Materials Engineering	
8	IT	Information Technology	
9	PHY	-	MS.C Physics
10	CHEM	-	
11	MATH	-	

Table (Appendix) 1a

In addition, all the Departments offer Ph.D. programmes.

Some Existing Laboratories in Various Departments

Department	Total No. of Labs	Name of the laboratory	
Chemical	12	1	Fluid Mechanics and Mechanical Operations Laboratory
		2	Mass Transfer Laboratory
		3	Process Dynamics & Control Laboratory
		4	Thermodynamics and Reaction Engineering Laboratory
		5	Heat Transfer Laboratory
		6	Energy Engineering Laboratory
		7	Biochemical Engineering Laboratory
		8	Environment Engineering Laboratory
		9	Membrane Science and Technology Laboratory
		10	Multiphase System Laboratory
		11	Project Lab
CE	12	1	Fluid mechanics Lab
		2	SOM Lab
		3	Concrete Technology Lab

		4	Pavement Engg. Laboratory
		5	Environmental engineering lab
		6	Structural Analysis Lab
		7	CAD Lab
		8	Traffic Engg. Lab
		9	Survey Lab
		10	Geotechnical Engg. Lab
		11	Engg. Geology lab
		12	Project Lab
ECE	10	1	Communication Systems Laboratory
		2	Microprocessor Laboratory
		3	Digital Electronics Laboratory
		4	Analog Electronics Laboratory
		5	Microwave Engg. Laboratory
		6	Optical Fiber Communication
		7	Electronic Design & Automation Tools -II
		8	VLSI Lab
		9	Network Security Lab
		10	Computational Lab
		11	Project Lab
ME	12	1	Steam lab
		2	Production Technology Lab
		3	Fluid Mechanics Lab
		4	Internal Combustion Engines Lab
		5	Tribology Lab
		6	Heat Transfer Lab
		7	Mechatronics Lab
		8	Dynamics Lab
		9	CAD Lab
		10	Industrial Engineering Lab
		11	Metrology Lab
		12	Advanced Strength of Material Lab
		1	Basic Electrical Engineering Lab
		2	Control Systems Lab

EE	12	3	Electrical Measurement Lab		
		4	Power Systems Lab		
		5	Power Electronics Lab		
		6	Electrical Machines Lab		
		7	Microprocessor and DSP Lab		
		8	Computation Lab		
		9	High Voltage Engineering Lab		
		10	Virtual Instrumentation Lab		
		11	Energy Systems Lab – (For Research Scholars)		
		12	Project Lab		
		CSE		1	Artificial Intelligence Lab
				2	Computational Lab
3	Database Lab				
4	Computer Graphics Lab.				
5	Networks & Security Lab				
MME		1	Mechanical Metallurgy Lab.		
		2	Physical Metallurgy Lab.		
		3	Foundry Technology Lab.		
		4	Mineral Dressing Lab.		
		5	Metallography & Heat Treatment Lab.		
		6	Fuels / Furnaces / Refractories Lab.		
		7	Powder Metallurgy Lab		

Table (Appendix) 1b

Proposed New B. Tech. Courses (To be opened with Existing Departments)

Proposing Deptt.	Proposed B. Tech. Courses	Year of starting	Student Intake	Faculty Requirement			Lab Staff Requirement				Space Requirement
				Prof	Asso. Prof.	Asst. Prof.	Technician	Lab Attd.	Clerk	Peon	
CE	Environmental Engineering	2015-16	30	01	02	04	03	06	01	01	25000 Sft.
ME	B.Tech. in Industrial & production Engineering	2016-17	50	02	04	08	02	02	01	01	

Chemistry & Chemical Engg.	B. Tech in Bio-technology	2015-16	60	01	01	02	02	01	01	01		3000 Sft
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Table (Appendix) 1c

Proposed M. Tech./ M.Sc. Courses (To be opened with Existing Departments)

Deptt.	Proposed Courses	Year of Starting	Intake	Intake Enhancement		Faculty Requirement			Lab Staff Requirement				Space Requirement	
				Year	No.	Prof .	Assoc. Prof.	Asst. Prof.	Scientific Officer	Technician	Lab Attd	Peon		Clerk
CE	Environmental Engg. & Management	2019-20	25	--	--	01	-	02	01	01	01	-	-	3000 Sft
	Geotechnical Engineering	2013-14	25	--	--	01	-	02	-	01	01	-	--	
	Transportation Engineering	2014-15	25	--	--	01	-	02	-	01	02	-	--	
ME	Tribology & maintenance	2012-13	25	--	-	01	-	02	-	01	01			
	Thermal Engg.	2020-21	25	--	-	01	-	02	-	01	01			
	Mechotrons & MEMS	2019-20	25	--	-	01	01	02	-	01	01			
	Automotive Engg.	2018-19	25	--	-	01	01	02	-	01	01			
	Production Engg.	2018-19	25	--	-	01	-	02	-	01	01			
Industrial Engg.	2019-20	25	--	-	01	-	02	-	01	01				
EE	Power & Energy Systems	2013-14	25	--	-	01	-	02	-	01	01			
	Power Electronics & Drivers	2021-22	25	--	-	01	-	02	-	01	01			
	Control & Automation	2021-22	25	--	-	01	-	02	-	01	01			
CSE	M.Tech. CSE	2023-24	20			01	01	02	-	02	-	-	--	
ECE	Information Security	2023-24	25	--	-	01	01	02	-	01	01	-	--	
	Micro Electronics	2015-16	25	--	-	01	01	02	-	01	01	-	--	
	Wireless Communication	2020-21	25	--	-	01	01	02	-	01	01	-	--	
CHE	Biochemical Engg. & Biotechnology	2024-25	15	-	-	01	02	02	01	01	01	-	01	
	Environmental Engg.	2021-22	15	-	-	01	02	02	01	01	01	-	01	

MME	M.Tech. in Metallurgical & Materials Engg	2022-23	15		15	01	01	02	-	02	02	01	01	
MATH (M.Sc/ M.Tech)	M.Sc. Applied Mathematics	2020-21	15	2014-15	25	-	-	01	-	-	-	-	--	
Chem	M.Sc. in Industrial Chemistry	2022-23	20	2017-18	25	01	01	02	-	01	01	-	-	
	M.Sc. in Bio-Science	2023-24	20	2017-18	25	01	01	02	-	01	01	-	-	
PHY	M.Sc. in Applied Physics	2024-25	15	2016-17	25	02	-	-	-	-	-	-	-	

Table (Appendix) 1d

Proposed PG Diploma Courses (To be opened with Existing Departments)

Deptt	Proposed PGD Courses	Year of start	Intake	Enhancement		Faculty requirement			Staff requirement				Space Requirement
				Yr	No.	Prof.	Assoc. Prof.	Asstt. Prof.	Technician	Lab Attd.	Clerk	Peon	
CHE	Industrial Instrumentation	2022-23	25	-	-	-	-	02	-	-	-	-	150 m ²
MME	Failure Analysis	2024-25	25	-	-	-	01	02	01	02	-	01	200 m ²

Table (Appendix) 1e

Proposed Centres (To be opened separately)

Deptt	Proposed Centres	Year	Faculty requirement				Staff requirement				Space Requirement
			Prof.	Asso. Prof.	Astt. Prof.	Scientific Officer	Technician	Lab Attd.	Peon	Clerk	
ME	Non Destructive Testing & Evaluation Centre	2014-15	01	02	--	1	1	1	1	-	200 m ² for each of the Centres
	Energy Research Centre	2014-15	01	02	--	1	1	1	1	-	
	Ergonomics Centre	2018-19	01	02	--	1	1	1	1	-	
	Centre for Nano Science & Engg.	2020-21	01	02	--	1	1	1	1	-	
	Fatigue & Fracture Evaluation Centre	2020-21	01	02	--	1	1	1	1	-	
	Crygonic Research	2021-22	01	02	--	1	1	1	1	-	

	Centre										
	Rapid Prototyping & Reverse Engg. Centre	2022-23	01	02	--	1	1	1	1	-	
	MEMS Design Centre	2023-24	01	02	--	1	1	1	1	-	
ECE	Centre for Telemediiciens	2015-16	01	01	02	01	02	01	01	-	
MME	Testing & Evaluation of Materials Quality	2015-16	01	01	02	01	04	02	01	01	
EE	Centre for Energy Studies	2015-16	01	01	02	01	02	01	01	-	

Table (Appendix) 1f

Deptt.	Additional Space Requirement (m ²)					
	Class Rooms	Labs	Seminar Rooms	Others (Faculty rooms etc.)	Proposed New Deptts	Total space
CE	200 m ²	500 m ²	100 m ²	100 m ²	600 m ²	1500 m ²
EE	200 m ²	500 m ²	100 m ²	200 m ²	-----	1000 m ²
ME	400 m ²	500 m ²	100 m ²	600 m ²	-----	1600 m ²
CSE	300 m ²	400 m ²	100 m ²	200 m ²	-----	1000 m ²
ECE	400 m ²	500 m ² .	100 m ²	200 m ²	-----	1200 m ²
CHM	400 m ²	200 m ²	100 m ²	200 m ²	-----	900 m ²
MME	400 m ²	500 m ²	200 m ²	500 m ²	-----	1600 m ²
PHY	200 m ²	200 m ²	100 m ²	100 m ²	-----	600 m ²
MATH	200 m ²	100 m ² .	100 m ²	200 m ²	-----	600 m ²
HSS	100 m ²	100 m ²	100 m ²	400 m ² .	-----	600 m ²
10 Centres	7X 200m ²					1400 m ²
Total:						9600 m ² say 10,000 m ²

Table (Appendix) 1g

Proposal for consideration of establishment of New Campus.

Sl No	Execution period	Name of the Project	Built up area where applicable	Estimated cost in Lacs
1	2011-17	2500 capacity Boys' Hostel	10,000 m ²	1500.00
2	-do-	500 capacity Girls' Hostel	1500 m ²	300.00
3	-do-	Construction of Married Scholars Hostel (PG/Ph.D students) (A) 300 capacity P.G Boys (B) 100 Married Scholars	12060 m ²	1810.00
4	-do-	New Library building	10,000 m ²	1500.00
5	-do-	Community cum Meditation Centre 1000 capacity	4000 m ²	600.00
6	-do-	Construction of Auditorium building	3100 m ²	465.00
7	-do-	Market Complex	2000 m ²	300.00
8	-do-	Security Barrack 100 capacity	554 m ²	84.00
9	-do-	Construction of Administrative building	2700 m ²	405.00
10	-do-	Construction of Estate Department, Central Store Office Building, T&P, NCC etc.	3000 m ²	450.00
11	-do-	Augmentation of electrical power supply (i) 33/11 KV sub station (ii) 11 KV distribution	250 m ²	38.00
12	-do-	Augmentation of Class room space	2000 m ²	300.00
13	-do-	Augmentation of Labs.	2000 m ²	300.00
14	-do-	Augmentation of Residential Area	2500 m ²	375.00
15	-do-	Recreational facilities for students viz. OA theatre, swimming pool and indoor stadium	3000 m ²	450.00
16	-do-	Construction of internal roads	-	1200.00
17	-do-	Construction of Institute main gate	-	25.00
18	-do-	Improvement of landscaping, Echo Park, Children Park	-	250.00

Table (Appendix) 1h

ANNEXURE-II

Recruitment Rules for Faculty of NITs

1. **Short title and commencement:** These rules may be called the NIT Faculty Recruitment Rules, 2011. These shall come into force from the date of their notification which will follow their acceptance by the Board of Governors of the concerned Institute.

2. **Definitions:** In these rules, unless the context otherwise requires;

a) “Act” means NIT Act, 2007.

b) “Statutes” means the First Statutes of the NITs and the Statutes subsequently framed by the respective NIT or framed by the Ministry of Human Resource Development.

c) “Service Rules” means Service Rules of the respective NIT

d) “Faculty” means the Professor, Associate Professor and Assistant Professor of the NITs.

3. **Method of Recruitment and other matters:** The method of recruitment and other matters relating to the post of Faculty shall be specified in the Schedule annexed to these rules.

4. **Deputation/Contractual Appointments:** Faculty, who are appointed on contractual basis, shall be for a fixed period not exceeding five years. Faculty without Ph.D. degree shall be recruited on contract basis only.

5. **Disqualification :** No person,

(i) Who had entered into or contracted a marriage with a person having a spouse living;
or

(ii) Who having a spouse living, has entered into or contracted a marriage with any person.

shall be eligible for appointment to the said post; provided that the Board of Governors may, if satisfied that such marriage is permissible under the personal law applicable to such a person and the other party to the marriage and that there were other grounds for so doing, exempt any person from the operation of this rule.

6. **Saving:** Nothing in these rules shall affect reservations, relaxations of the age limit and other concessions required to be provided for the candidates belonging to the Scheduled Castes, Scheduled Tribes, Other Backward Classes, Ex-servicemen and other special categories of persons in accordance with the orders issued by the Central Government from time to time in this regard. These rules shall also not affect the recruitments already made or for which recruitment process has already commenced; but any appointment or promotion to higher post proposed to be made or made subsequent to the notification of these Recruitment Rules will be governed by these Recruitment Rules.

7. **Other conditions of service:** The other conditions of service of the Faculty for which no specific provisions have been made in these rules shall be regulated in accordance with such rules as are, from time to time, applicable as per the First Statutes of the NITs and the subsequent amendments. For matters not covered by the Statutes, the corresponding Central Government Rules shall be applicable.

8. **Qualifications and other requirements of Selection:** Qualifications and other requirements of selection for various faculty posts are given in detail in the annexures contained in attached schedule.

9. **Amendment to Recruitment Rules:** These rules may be amended by the Board of Governors of the respective NIT for reasons to be recorded in writing. The amended rules shall not be applied retrospectively and shall take effect only after they are approved by the Ministry of Human Resource Development.

Schedule

Recruitment Rules (RRs) for the Post of Assistant Professor, Associate Professor and Professor of NITs.

1. **Name of Posts** :

Assistant Professor / Associate Professor / Professor of NITs.

2. **Number of Posts** :

As per norms fixed by the Govt. of India

3. **Classification** :

Group – A (Pay Bands PB3 and PB4)

4. **Whether Selection post or non-Selection post:** By Direct Recruitment

5. **Age limit for Direct Recruitment:**

Age barriers expressed in terms of “Age preferably below n’ years” for various posts are given in Annexures. Fresh appointment beyond the age of 60 years is discouraged except in the case of faculty with exceptionally brilliant research career and with ongoing or approved externally funded research projects.

6. Educational and other Qualification required for Direct Recruits: Given in Annexures – I & II.

7. Whether age and educational qualifications prescribed for Direct Recruits will also apply in Case of promotees:

There shall be no distinction between external and internal candidates with regard to the requirements of qualification and experience. An internal candidate is deemed to be recruited directly, irrespective of his position against a vacancy, i.e. whether he is recruited against a vacancy or supernumerary under career advancement. Limitation on age bar and specialization, however, will be applicable to external candidates only.

8. Period of probation, if any:

One year. It may be extended by the respective BoG, on recommendation of the Director.

9. Method of Recruitment:

a) Whether by Direct Recruitment or

b) By promotion/ by deputation and percentage of vacancies to be filled up by various methods:

c) All posts will be filled up by direct recruitment (including recruitment of internal candidates without a clear vacancy for career advancement) failing which on deputation from institutions of comparable standing, failing which on contract for a maximum tenure of five (05) years. Assistant Professors without Ph.D. degree will be recruited on contract basis only.

10. In case of recruitment by promotion/ deputation/ absorption, grades on which promotion/ deputation/ absorption to be made applicable:

Not applicable.

11. Basic principles of Faculty recruitment:

a) A Ph.D. degree shall be the minimum qualification for a regular faculty position in NIT. Candidates with M. Tech. degrees may be appointed as Assistant Professors, on contract basis only. The Institutes will strive to provide necessary facilities to such contract faculty to complete their own Ph.D. either within the Institutes (if facilities exist) or outside. Any deficiency in extension of such facility, however, will not be a ground for award of regular post without a Ph.D. degree.

b) All recruitment and pay-fixation shall be done by the BoGs of the Institutes only on the recommendations of duly constituted Selection Committees. There shall be no scope of fixing of altering pay (pay in pay-band or grade pay) outside the Selection Committee. The Selection Committee shall be the only entity empowered to consider the past services and qualifications of a candidate.

c) Recommendations of the Selection Committee will be arrived at by discussions within the Committee. Contents of such discussions and details of transactions within the Committee will not form a part of permanent records or minutes.

12. Distribution of posts among departments / centres and designations:

While there is no rigid formula for distribution of sanctioned posts among the departments and centres within an Institute, Annexure V gives a recipe for distributing sanctioned faculty posts among various departments of an Institute. But the BOG, on the recommendation of the director, shall dynamically allocate sanctioned faculty positions among the departments taking into consideration academic programmes of various departments, existing quality of faculty, expected retirements and availability of bright candidates.

There will be three designations – Professor, Associate Professor and Assistant Professor. At present, all NITs have been granted a three tier “rigid” faculty distribution among the three designations – P:AsP:AP = 1: 2: 4, with a Career Advancement Scheme where faculty may move to higher pay (AGP) and designation in the absence of a clear vacancy. Details of CAS provisions are given later in this schedule.

Institutes may, however, opt through a resolution of the Board and concurrence of the Council of NITs (or the Standing Committee of the Council on behalf of the Council) the 4 tier flexible faculty cadre announced by the Ministry vide its order of 18th August, 2009.

13. Qualifications and Experience:

Qualifications and experience required for various posts as well as the selection procedure are listed in Annexures – I to IV for both the 3 tier rigid faculty structure as well as the 4 tier flexible faculty structure. While all the NITs follow the 3 tier structure at the moment, it is expected that most of the Institutes will follow the 4 tier flexible cadre structure in due course with the approval of the Ministry

14. Faculty from industry without Ph.D. degree:

There shall be necessary provision for inducting faculty from industry (or comparable organisations) with substantial professional and R&D experience, but not having a Ph.D. degree. For candidates with good number (say 10) of publications in leading journals of the field, the candidates being the lead author, the requirement of Ph.D. degree may be waived. In all other cases, such a candidate may be taken on contract till he completes the Ph.D. degree.

15. Policy on avoiding in-breeding:

Most leading universities of the world, including the best Institutes of India have an explicit or implicit policy of not inducting their own students into the faculty. To avoid such in-breeding, the NITs will follow the following policies:

a) Candidates who have obtained or are expected to obtain their most recent degree (Ph.D. or M.Tech.) from the Institute will normally not be considered for recruitment, except where there is a 3 years’ gap (approximately) between leaving the Institute and the expected date of joining.

b) This is not applicable to candidates who are already members of the faculty, either regular or on contract, and are pursuing a higher degree in the Institute.

c) In special cases, where the department (at the time of short-listing) or the Selection Committee feels that an exception needs to be made (for reasons such as severe shortage of faculty in a given academic field or exceptionally brilliant candidate or any other), the reasons for such exceptions are to be recorded in writing and put up to the Board of Governors for approval. The Board, if convinced, may confirm the selection. Such appointments will not serve as precedence.

16. Multiple attempts:

In order to keep the number of candidates interviewed within practical limits, Scrutiny Committee may, if it deems fit, reject a candidate on his third or further attempt, if the candidate has failed to win the same post in two previous attempts, (either in scrutiny or selection stage), even if he meets the short-listing criteria, except when there is significant new achievement justifying an exception.

17. Functioning of the Selection Committees:

While the Scrutiny Committee and Selection Committee will use all information available to them and be as quantitative as possible, their recommendations will reflect a collective decision based on accumulated professional experience which is often not possible to quantify. Committees will not be obliged to record the details of their individual reasoning process.

18. Auxiliary Faculty Positions:

Norms for appointment of adjunct, honorary, chair, emeritus, contractual, visiting, ad hoc and temporary faculty are given in Annexure – VI.

19. Seniority of Faculty:

Personal prospects as well as responsibilities assigned by the Administration in an Institute of higher learning should be decided on academic merit and performance, rather than by service seniority. However, in cases where

“seniority” is an issue, the following will be the deciding factors in decreasing order of importance: (i) Designation (ii) AGP, (iii) Pay in Pay Band (iv) Date of BoG meeting in which current AGP was sanctioned (iv) Position in the merit list prepared by the Selection Committee, (vi) Seniority in lower AGP or 5th CPC (vii) Date of Birth.

20. Career Advancement Scheme:

A Career Advancement Scheme (CAS) is an essential component of a rigid faculty structure, whereby an individual faculty member can move to a higher designation and/or pay (AGP) in the absence of a clear vacancy. The CA Scheme of NITs is distinct and is fundamentally different from those of UGC, AICTE or similarly placed agencies.

A CAS promotion may be given to a serving faculty member on satisfying two essential criteria simultaneously:

- a) Completion of specified number of years of service in the same institute in a lower designation or AGP, AND
- b) Being selected by a valid Selection Committee using the same criteria, procedure and common interview as prescribed for directly recruited candidates (internal or external) and being included in a common panel.

There shall be no legal or social distinction between a faculty member selected against a clear vacancy or in the absence of one under CAS. Both are deemed to be directly recruited. There shall be no retrospective promotion, neither real nor notional.

If and when a vacancy occurs in the higher posts and there are serving faculty members with corresponding designation under CAS, they must be adjusted as per the respective seniority list before fresh advertisements are published. Under special circumstances, if an Institute is looking for new faculty at Professor or Associate professor level with expertise not available within the Institute, the Board of Governors (on recommendations of the ACoFAR) can set aside a vacant position exclusively for external recruitment.

In the case of up-gradation of Professors to HAG scale, personal interview may be dispensed with. The Selection Committees [formed as per provisions of the Statutes] shall make their recommendation on the strength of publication, books, patents sponsored projects, industrial consultancy, Ph.D. guidance, and contribution to Institute's administration as submitted by the candidate.

21. Transition from rigid to flexible Cadre Structure:

When an Institute adopts the 4 tier flexible cadre structure, every faculty member will continue with his current designation and pay in the pay band. The AGP will be reset to its new values (Rs.10500.00 for professor and Rs.9500.00 for Associate Professor) as appropriate to the new structure. Neither a selection process nor a personal interview will be necessary.

In some cases, the pay in the pay band may be below the minimum applicable to a particular designation i.e. Rs.43000.00 for Associate Professor and Rs.48000.00 for Professor. As a one-time measure, incumbents will be permitted to continue with their existing pay in pay band. A faculty member may, however, request appearance before a Selection Committee for up-gradation of pay in the pay band to the minimum value compatible with his AGP. The pay in the pay band will be corrected with prospective effect if so recommended by the Selection Committee and approved by the BoG.

22. Maintaining National character of NITs:

As decided by the Council the institute shall strive to recruit 50% faculty not domicile of that state in which the Institute is located.

23. Miscellaneous:

A copy of these regulations including the academic criteria specified for various posts and selection procedure in Annexure – I to IV will be made available to every member of the Selection Committee before start of interviews.

**Prescribed Minimum Qualification and Experience for
Faculty Positions of**

NATIONAL INSTITUTES OF TECHNOLOGY

(Under the standard 3 tier rigid faculty structure)

Designation, Pay Band and Academic Grade pay	Essential Qualification	Relevant Experience	Other essential requirements (Expected to be amended upwards with time, as the NIT system achieves higher standards)	Additional Desirable requirements	Age : Preferably below
Assistant Professor (On contract) Grade Pay Rs.6000.00 PB3 + 2 increments	M. Tech.	None	None	Advanced state of Ph.D. work in a reputed institute.	30 years
Assistant Professor Grade Pay: 7000.00	Ph. D.	None	One paper accepted for publication in an SCI journal	Two SCI Journal papers or one patent; may be based on Ph.D. work.	35 years
Assistant Professor Grade Pay Rs.8000.00	Ph. D.	3 years after Ph.D. or 6 years total (not counting Ph.D. enrolment period) after obtaining M. Tech. degree.	2 papers in SCI journals outside Ph. D. work. One ongoing sponsored project for candidates from academia. Two experimental or computational projects added to teaching laboratories where appropriate.	One Ph. D. supervision ongoing; One Patent; Experience in industry or R & D lab. of repute; M. Tech., M. Sc. or B. Tech. project supervision on live industrial problems.	N. A.
Associate Professor Grade Pay Rs.9000.00 PB4	Ph. D.	6 years after Ph.D., or 9 years total (not counting Ph.D. enrolment period) out of which 3 years should be after Ph.D. and as assistant professor or equivalent in a reputed institute, laboratory or industry	4 papers in SCI journals; One Ph. D. guided as sole or principal supervisor. Two projects ongoing or one ongoing plus one completed. One self financed or two Govt. sponsored short-term courses offered. Two experiments or computational projects added to teaching laboratories where appropriate.	One or more patents; Supervising one or more students for Ph. D.; Strong liaison with industry; Offering courses through application of ICT.	N. A.

Table (Annexure)2a

Designation, Pay Band and Academic Grade pay	Essential Qualification	Relevant Experience	Other essential requirements (Expected to be amended upwards with time, as the NIT system achieves higher standards)	Additional Desirable requirements	Age : Preferably below
Professor Grade Pay Rs.10,000.00 PB-4	Ph. D.	10 years after Ph.D. or 13 years (not counting Ph.D. enrolment period) total out of which 7 years to be after Ph.D. including 3 years at Associate professor level.	Two Ph.D.s guided in career as sole or principal supervisor, plus one ongoing. The following during the past 4 years: (i) 3 papers in SCI journals; (ii) One high value sponsored or consultancy project; (iii) Two self financed or four Govt. sponsored short-term courses as coordinator and main teacher, (iv) Two experiments or computational design projects added to teaching laboratories where appropriate.	One or more Patents; Supervised more than three students for Ph. D.; Preparing E-Learning material. At least one self-financed short-term course offered every year. Strong liaison with industry. Offering significant support to institute management; High value sponsored or consultancy projects.	
HAG scale	Ph. D.	Six year as Professor with AGP 10000.00 or higher in an institute of national importance.	4 Ph. D.s guided in career as sole or principal supervisor plus at least one full time resident student continuing. The following during the past six years: (i) 4 papers in SCI journals; (ii) 2 high value sponsored or consultancy projects, plus one ongoing, (iii) 3 self financed or 5 Govt. sponsored short-term courses offered as coordinator and main teacher, (iv) Three experiments or computational projects added to teaching laboratories. (v) Significant contribution to institute management through personal initiatives in responsible positions.	Truly significant contribution in one area – publications, writing of text books or reference books, sponsored projects, consultancy and support to industry, E-learning packages, creative contribution to institute's welfare.	N. A.

Table (Annexure)2b

Prescribed Minimum Qualification and Experience for

Faculty positions of

NATIONAL INSTITUTES OF TECHNOLOGY

(Under proposed four tier flexible faculty structure)

Designation, Pay Band and Academic Grade pay	Essential Qualification	Relevant Experience	Other essential requirements	Additional Desirable requirements	Age limit (Desirable)
Assistant Professor (On contract) Grade Pay Rs.6000.00 PB3 + 2 increments	M. Tech.	None	None	One publication in an SCI journal; Advanced State of Ph.D. work in a reputed Institute.	30 years
Assistant Professor (On contract) Grade Pay: 7000.00	Ph. D.	None	None	Two papers in SCI journals or one patent; may be based on Ph.D. work.	35 years
Assistant Professor Grade Pay Rs.8000.00	Ph. D.	3 years after Ph.D. or 6 years total (not counting Ph.D. enrolment period) after obtaining M. Tech. degree.	2 papers in SCI journals outside Ph. D. work. One ongoing sponsored project for candidates from academia. Two experimental or computational projects added to teaching laboratories where appropriate.	One Ph. D. supervision ongoing; 1 Patent; Experience in industry or R & D lab. of repute; M. Tech., M. Sc. or B. Tech. project supervision on live industrial problems.	N. A.
Associate Professor Grade Pay Rs.9500.00	Ph. D.	6 years after Ph.D. out of which 3 years should be at the level of Assistant Professor or equivalent in a reputed university, R & D Lab. or relevant industry.	6 papers in SCI journals; One Ph. D. guided as sole or principal supervisor plus one continuing. Two projects ongoing or one ongoing plus one completed. Two self financed or three Govt. sponsored short-term courses offered as coordinator and main teacher. Four experiments or computational projects added to teaching laboratories where appropriate.	1 or more patents; Supervising two or more students for Ph. D.; Strong liaison with industry; Offering courses through application of ICT.	N. A.

Table (Annexure)2c

Designation, Pay Band and Academic Grade pay	Essential Qualification	Relevant Experience	Other essential requirements	Additional Desirable requirements	Age limit (Desirable)
Professor Grade Pay Rs.10,500.00 PB-4	Ph. D.	10 years after Ph.D.	Three Ph. D. degrees guided in career. The following during the past 4 years: (i) 4 papers in SCI journals; (ii) One high value sponsored or consultancy project; (iii) Two self financed or four Govt. sponsored short-term courses offered as coordinator and main teacher; (iv) Four experiments or computational design projects with added to teaching laboratories where appropriate.	Two or more Patents; Supervised more than three students for Ph. D.; Preparing E-Learning material. At least one self-financed short-term course offered every year. Strong liaison with industry. Offering significant support to institute management; High value sponsored or consultancy projects.	N. A.
Professor HAG Scale	Ph. D.	Six years as Professor with AGP 10000.00 or 10,500.00 in an institute of national importance.	5 Ph. Ds guided as sole or principal supervisor plus at least one full time resident student continuing. The following during the past six years: (i) 5 papers in SCI journals; (ii) 2 significant sponsored or consultancy projects, plus one ongoing; (iii) 3 self financed or 5 Govt. sponsored short-term courses offered as coordinator and main teacher; (iv) Three experiments or computational projects added to teaching laboratories. (v) Significant contribution to institute management through personal initiative in responsible positions.	Truly significant contribution in one area – publications, writing of text books or reference books, sponsored projects, consultancy and support to industry, E-learning packages, creative contribution to institute's welfare.	N. A.

Table (Annexure)2d

Annexure 2.1 Board of Studies (BOS)

DEPARTMENT OF ELECTRICAL ENGINEERING NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

Minutes of the Board of Studies Meeting held on 27-08-2014 at 10.00 a.m in the Departmental Committee Room of Electrical Engineering.

Following members attended the meeting:-

- | | | |
|----|--|-----------------|
| 1. | Dr. Aijaz Ahmad,
Professor & Head
Department of Electrical Engineering. | Chairman |
| 2. | Prof. Majid Jameel,
Prof. & Head,
Department of Electrical Engineering,
Jamia Millia Islamia, New Delhi | External Member |
| 3. | Dr. M. D. Mufti,
Professor,
Department of Electrical Engineering. | Member |
| 4. | Dr. Ab. Hamid Bhat,
Associate Professor
Department of Electrical Engg. | Member |
| 5. | Dr. Sheikh Javed Iqbal
Associate Professor,
Electrical Engineering Department | Member |
| 6. | Dr. S. A Lone
Professor
Department of Electrical Engg. | Special Invitee |

Dr. Mohammad Abid Bazaz did not attend the meeting due to his preoccupations.

Following agenda was discussed and decision taken:

A Revision of B. Tech. Scheme:

It was suggested to modify the present B. Tech (Electrical) curriculum to conform to the present requirements and objectives. It was resolved to make the following changes in the scheme:

1. 3rd semester:

- The course "Principles of Electrical Engineering" shall be renamed as "Basic Electrical Engineering", similarly "Principles of Electrical Engineering Lab." be renamed as "Basic Electrical Engineering Lab."
- The course "Mechanical Engineering" taught by Mechanical Engineering Department of the Institute was suggested to be renamed as Engineering Thermodynamics/Thermal Engg. The BOS confirmed the proposal subject to the confirmation by Mechanical Engineering Department.


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2. **4th Semester.**

The course No: ELE-404 i.e Non-conventional Energy Sources was decided to be dropped and introduce it as an elective at higher semester level with modified syllabus. Accordingly the revised credit structure of following courses was revised as follows:

• Control System-I	3	1	0	4
• Electric Measurements & Measuring Instruments	3	1	0	4
• Electronics-II	3	1	0	4

3. **5th semester:**

Power System Lab.-I which was earlier dropped from 5th semester will be re-introduced. Accordingly the revised credit structure of Power System-I will be 2 1 0 (3 credits) & for Power System Lab. will be 0 0 2 (1 credit)

4. **6th semester:**

The course No: ELE-603 was decided to be renamed as "Electric Machine Design instead of Computer Aided Design of Electric Machines and course No: ELE-603P (Computer Aided Design Lab.) was dropped. Furthermore the syllabus of course No: ELE-602 i.e Power Electronics was modified as proposed by the concerned course in charge. Also the credit / LTP structure of course ELE-606 i.e Microprocessor was revised to 3 1 0 4 (4 credits)

5. **7th semester:**

The courses: General Management & Economics (HSS-701) and one of the Electives will be shifted to 8th semester and instead Power System-III and Power Station Practice will be included in 7th semester. This was done to meet the demand of students to have maximum coverage of GATE syllabus at 7th semester level. The syllabus of Advanced Power Electronics was revised as proposed by course in charge.

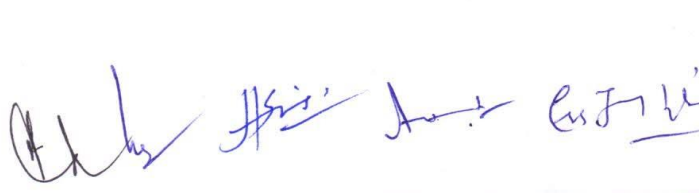
6. **8th semester:**

Due to the decision at (5) the courses Power System-III and Power Station Practice are shifted to 7th semester and accordingly courses "General Management & Economics and one Elective will be shifted to 8th semester. Further the course "Non-conventional Energy Courses" dropped at 4th semesters level will be included here as an elective with modification of syllabus with new title, "Renewable Sources of Electrical Energy."

It was further decided that Elective-IV i.e High Voltage Engineering will be treated as core course instead of elective.

Electives:

It was decided to have a common list of electives to be floated at 7th & 8th semester level to have more flexibility. Further the electives i) Restructuring of Power System ii) Power System Optimization iii) Flexible AC Transmission iv) Fuzzy Logic & Neural Network (renamed as Soft Computing) and v) Stand Alone Power System will be dropped from the list as these have now been introduced at M. Tech. Level.

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It was also resolved to explore the possibility of coverage of maximum-GATE syllabus in the curriculum. Accordingly the subject experts were requested to do the needful wherever feasible. It was further suggested that syllabus of each course shall be put in the form of appropriate number of units / sections.

B. Revision of M. Tech. Scheme

The scheme of courses offered in M. Tech. was proposed to be revised. Following modifications in the scheme was proposed.

i) Revision of syllabi in following courses: The BOS approved the modification of syllabi of following subjects to cater the present needs of Electrical Engineering, subject to the confirmation by all subject experts.

- a) Advanced Power System Analysis
- b) Power Quality Problems & Solutions
- c) Control of Electrical Energy Systems
- d) Advanced Mathematics
- e) Power System Dynamics & Control
- f) Power System Optimization
- g) HVDC System
- h) Stand Alone Energy System


Further it was decided to rename the Advanced Mathematics course as "Optimization Techniques". Also an alternative title was proposed to be sought for the course "Stand Alone Energy System".


ii) The power System Lab.-II course at II Semester was renamed as Power System Simulation Lab.-II. It was also resolved to have only two theory courses (both Electives) in III semester in addition to seminar and Minor project. As such the core course "Power System Restructuring & Deregulation" is dropped and included as an elective. Accordingly the seminar shall be of 2 credits and minor project of 5 credits so that the overall credits for III semester remain 13 as before.

iii) Electives: It was further decided to float common list of electives to be taught from first to third semester.

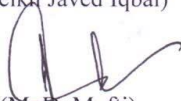
iv) Evaluation: The relative weightage of evaluation was revised so that it is in line with other B. Tech / M. Tech course of the Institute. The revised weightage of evaluation will be as follows:

1) Class Assessment	10%
2) Mid Term Evaluation (minor 1 & 2)	40%
3) Final Term Evaluation (Major)	50%

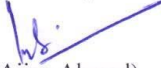

(Sheikh Javed Iqbal)


(Ab. Hamid Bhat)


(S. A Lone)


(M. D. Mufti)


(Majid Jameel)


(Aijaz Ahmad)

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Annexure 2.2
Academic calendar for the year 2018:

Spring 2018			
S.No	Activity	Date	
		From	To
Registration			
1	B.Tech 8 th Semester	19-02-2018	21-02-2018
	Registration with late fee @ Rs.400/=per day	Upto 26-02-2018	
	B.Tech. 2 nd 4 th & 6 th semesters and M.Tech/M.Sc. 2 nd & 4 th and Ph.D.	26-02-2018	28-02-2018
	Registration with late fee @ Rs.400/=per day	Upto 05-03-2018	
Commencement of classes			
2	Commencement of classes for B.Tech 8 th semester	22-02-2018	
	Commencement of classes for B.Tech. 2 nd 4 th & 6 th semesters and M.Tech/M.Sc. 2 nd & 4 th semesters and Ph.D	01-03-2018	
3	Extra-curricular Activities	28-04-2018	30-04-2018
4	Alumni meet-2018	28-04-2018	29-04-2018
Mid-term examination			
5	B.Tech 8 th semester	16-04-2018	21-04-2018
	B.Tech. 2 nd 4 th & 6 th semesters and M.Tech/M.Sc. 2 nd & 4 th semesters and Ph.D	23-04-2018	28-04-2018
6	Annual day	01-05-2018	
7	Practical Examination	Last week of May 2018	
8	B.Tech Project viva-voice Exam	11-06-2018	12-06-2018
9	M.Tech Dissertation viva-voice Exam	1 st week of July 2018	

End-Semester Examination		
10	B.Tech 8 th semester	From 28-05-2018
	B.Tech. 2 nd 4 th & 6 th semesters and M.Tech/M.Sc. 2 nd & 4 th semesters and Ph.D	From 19-06-2018
11	Advertisement for Ph.D admissions	Last week of May 2018
12	Supplementary examinations for odd semesters	From 02-07-2018
13	Summer-break	10-07-2018 22-07-2108
14	Special supplementary examinations for 8th semesters	From 16-07-2018

Autumn-2018			
S.No	Activity	Date	
		From	To
1	Registration for U.G, P.G & Ph.D	23-07-2018	25-07-2018
2	Registration with late fee @ Rs.400/=per day	Upto 30-07-2018	
3	Commencement of classes	26-07-2018	
4	Fresher's orientation day	16-08-2018	
5	Extra-curricular activities	07-09-2018	10-09-2018
6	Mid-Term Examination	10-09-2018	15-09-2018
7	Convocations	22-09-2018	
8	Alumni meet Delhi chapter	29-09-2018	30-09-2018
9	Tech. fest / ECA	13-10-2018	15-10-2018
10	National innovation day	15-10-2018	
11	Practical examination for all	1 st week of November	
12	National Entrepreneur day	09-11-2018	
13	End-term examination	From 12-11-2018	
14	Supplementary Examination for even semester	From 26-11-2018	
15	Winter vocations for students	10-12-2018	

Associate Dean Examinations

Dean Academic Affairs

Annexure-III

Recruitment Rules for faculty positions in NATIONAL INSTITUTES OF TECHNOLOGY

Common Essential Requirements

[For both 3-tier rigid and 4-tiers flexible systems]

1. Superior academic record at all levels from high school onwards.
2. First class in B. Tech. / M. Sc. and in M. Tech.
3. All degrees from reputed institutions, preferably from institutions of national importance or university departments in India or abroad.
4. Good oral and written presentation skills.
5. Strong command over fundamental subjects.
6. The following shall be considered as essential requirements, without which a faculty member will be deemed unfit for promotion or selection even if he has met or exceeded the prescribed qualification, experience and performance criteria.

Teaching (For teachers of same or different institute)	<ol style="list-style-type: none">a) At least 3 theory subjects (semester long) for each year of post-Ph.D. experience in a teaching institution.b) Commensurate volume of written material for assisting students-lecture notes, problem sheets ppts etc. shared with the students.c) Consistently good (better than Institutes average) score in student feedback on courses taught. [Institutes shall introduce computerized student feedback system and make the summary results available on the internal web site or equivalent publication.]d) Question papers for different exams set by the faculty members to be examined by Selection Committee.e) Introduction of new courses or revision of existing syllabi.f) No adverse record in teaching e.g. negligence in classes or exams.
Institute and professional Activity (For Teachers of same or different institute)	<ol style="list-style-type: none">a) Reasonable record of responsibility and creative performance in management of the organization (commensurate with length of service)- responsibility of Dean, HOD, Chairman or Members of Committees.b) Support to extra academic activity of students – NCC, NSS, Sports, Cultural, Music and Quiz etc.

	<ul style="list-style-type: none"> c) Organization of student functions. d) Warden ship of hostels and work towards improvement of living conditions of the students. e) Leadership and guiding students in scientific and technical work outside class room. f) Assisting management in construction, maintenance, ICT, Lawns & Gardens and providing services in the institute. g) Assisting management in record keeping, website management, document preparation, management of Convocation etc. h) Departmental activities – T&P, Seminars, projects, Library etc. i) Collaboration with other Institutions in India and abroad. Organising conferences, symposia and activities of j) professional societies. Strictly no adverse record of negligence or dishonesty j) in discharging one’s responsibility.
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Table (Annexure) 3

A faculty member is not expected to excel in all the fields, but he must contribute in at least two areas with visible contribution to each. Poor record under any of the above items, in terms of dishonesty, negligence, harassing beneficiaries, indifference or not taking up a responsibility will be viewed seriously by the selection committees. When an assignment is given by the administration, the faculty member must show initiative and work proactively towards improvement of his work environment instead of simply holding on to a position.

It is also expected that faculty members will take positive initiatives to be visible at the Institute-level so that they win the trust of the higher management and get assignments to contribute to institutional progress.

Notes:

It is expected that the NITs recruit faculty who have earned their degrees from Institutes of high-standing in India or abroad. The Scrutiny Committee and the Selection Committee are expected to judge the quality of the training that the candidates received during their own academic careers from the standards of the Institutes from where they earned their degrees. It will be within the power and responsibility of these Committees to reject candidates from Institution of low-standing even if their degrees and grades are above the required level. This consideration is applicable to candidates at Assistant Professor level.

1. A single individual is not expected to meet all the essential performance criteria listed in the tables of Annexure-I and II. **But in the judgment of the Selection**

Committee, the sum total of his contribution should exceed the sum total of the essential requirements given in the table above in terms of scholastic effort necessary.

2. Experience will be counted only when it is earned in a reputed institute, university, industry or laboratory on a job relevant to the department to which a candidate is applying. Experience shall normally mean the experience earned after award of M. Tech. degree.

3. The Selection Committee shall consider publications in journals of reasonable standing, ignoring publication in very weak journals. Professional judgment of experts in this matter shall not be questioned.

4. A publication shall normally mean publications which are covered by the Science Citation Index (SCI) where ever applicable. Papers accepted for publication and actually published will be seen to be at par.

5. In case of joint publications and joint Ph.D. guidance in an institution where there is no concept of “Principal Supervisor”, the Scrutiny Committee and the Selection Committee shall assign fractional credit. The Committee’s decisions on such matters shall be final in respective domains.

6. In Institutes without significant postgraduate or doctoral programme, as a temporary measure, the selection committees may consider and evaluate

publication of text books, sponsored projects from funding agencies, formal lecture notes, M. Tech and M.S. projects guided and collaborative work with industry as scholastic work in lieu of experience in guiding Ph. Ds.

7. The “essential qualifications “and” other essential requirement” given in Annexure-I and II are bear minimum for eligibility to be considered for promotion. An average faculty member is expected to generate performance output higher than the minimum prescribed in the tables in Annexures I and II.

8. Scholastic achievement and length of service and other essential but not necessary requirements shall form the criteria for promotion. But in matters of fresh selection, other considerations such as expertise of candidates vs. need of the department shall form dominant considerations.

9. There is no distinction between the requirements for “appointment against vacancy” and “promotion under CAS”, nor there do any distinction in the status of the two types of faculty members. A selection process shall cover both internal and external candidates, both being examined together by the same committee, the only exceptions being limiting a selection only to external candidates at entry level of Assistant Professor, and to internal candidates (under CAS) when there is no vacancy in a particular department.

10. If suitable candidates are not available for positions of Professor or Associate Professor, the positions may, at the discretion of the Board, be utilized for recruiting faculty in lower positions.

Annexure IV

Procedure for Selection of Faculty in NIT System

Today there is great diversity among the selection procedures being followed in institutions of higher learning in our country. Different systems have evolved in different institutes in response to their emphasis on research and teaching, historical and geographical factors. The procedure outlined here has generally, but not exactly, been followed in most IITs. The procedure is prescribed as a guideline, without insisting that it be followed religiously. Boards of Governors may opt for alternative procedures after examining their merit vis-a-vis the base line procedure given below.

1. The Director will create an “Advisory Committee on Faculty Recruitment (ACoFAR)” with a senior member of the faculty as the Chairman. Normally, he should be the Dean (Faculty Welfare); but Director shall have the discretion to assign the responsibility to Dy. Director or another senior Professor or handle it himself. The Chairman of ACoFAR shall be authorized to communicate with departments, candidates and experts on the advice of Director. In addition, the Committee shall discharge the following functions:

- a) Examine and advise on distribution of faculty positions among various departments;
- b) Proactively search for faculty candidates in India and abroad.
- c) Assist the Director in examining, short listing criteria and preparing panels of short listed candidates submitted by departments;
- d) Examine and recommend proposals for deviation in age, formal qualifications, industry experience or any other criterion or guideline;
- e) Reservation of positions for specialization or sub-specialisation and rank of faculty to be inducted; and
- f) Proactively search for candidates from reserved categories, and if not available after repeated attempts, prepare proposals for de-reservation in accordance with the relevant rules & regulations.

2. The Institute will create a panel of experts and update it on annual basis. The list will be prepared by taking inputs from departments. Director may also add extra names or delete some from the list. Normally the experts should be drawn from NITs, IITs, IIMs, IISERs, IISC, University departments, major R&D Laboratories (CSIR, ICAR, DAE, ISRO, DRDO etc.) and major industry. The list, along with postal and electronic addresses, designations, specialization and other relevant particulars of proposed experts is to be placed before the Senate and then the BoG for their approval. Every higher authority shall have the power to add and delete names. In addition, fellows of INAE and the 3 science academies will be automatically included in the panel. Every attempt should be made to ensure that major specializations of each department are adequately represented in the panel.

3. While the above is a permanent list, upgraded periodically, preferably every year, the BOG, at its discretion, may permit Director to choose experts for every single selection process from the full panel or from specific sub panels.

4. As per NIT Act, the visitor shall nominate one member to the selection committee. It is observed in practice that being present in all sessions of a selection process (that spreads over two to four weeks) becomes hard on the distinguished professors who serve as visitor's nominees, and they are often unwilling to spare the time. The Ministry will recommend to the Hon'ble Visitor to nominate a panel of five distinguished persons in different subject areas to serve as Visitor's nominees and permit institutes to invite them as per their availability and convenience.
5. The director will send a copy of the panels approved by the Secretariat of the Council of NITs for records.
6. It is extremely important that the suggested panel of experts is examined critically by the Board and the Ministry and any member with a questionable integrity is removed.
7. Prior to a selection process, the Director will choose experts from the approved panels ensuring a reasonable distribution among specialisations, and to the extent possible, diversity of background, place of work etc.
8. In addition to the expert members of the selection committee, the Director, as Chairman of the Committee, may invite observers from SC/ST and minority communities or any other person of repute to instil confidence in the minds of the candidates and of the Institute community.
9. On advice of the Director, the Chairman, ACoFAR will seek from the Departments the specific specializations where new faculty is to be recruited. The HODs will consult senior faculty colleagues and prepare the proposals to the Institute, which will be collated by the Chairman, ACoFAR and placed before the Director for approval. The Director is expected to review the proposals critically and finalize the draft advertisement including specializations, critical dates, newspapers of advertisement and other details.
10. Serving regular faculty members shall be eligible to apply for higher positions in their own departments irrespective of their specializations, if they satisfy other advertised criteria.
11. Application may be received on paper, on-line or both, depending on the technological resources of the respective Institute. In addition, the Institute will consider applications received against standing advertisement, if any, and unsolicited applications.
12. While applications received within the advertised closing date shall definitely be considered, late applications (upto the interview time) may be considered at the discretion and convenience of the administration.
13. In addition to the advertisements, all sections of the institute administration - Director, members of ACoFAR, HODs and all faculty members will make proactive effort to attract applications from prospective candidates, without making any commitment of selection. Such efforts will include postal and email correspondence, telephonic talks and public announcement when there is an opportunity.
14. Applications, when received, will be organized, relevant information summarized, and sent to the departments by the Registry, for short listing. The objectives of short listing are two folds:-
 - (a) to reject applications that do not meet advertised criteria and

(b) to select the best candidates from the remaining list so that the number of candidates to be called for interview with the experts remains within manageable limits.

15. Departments will make attempt to set “short listing criteria” that can be easily implemented. But, considering the multiple attributes that need to be considered, it may become necessary to make case by case exceptions. In all such cases the general short listing criteria and the reasons for exception, if any, are to be recorded in writing. Short listing criteria may include, among others, such conditions as:

(i) superior academic record – all through first class career or higher grades in B.Tech/M.Sc./M.Tech, higher than advertised criteria,

(ii) Reputation of institutions from where the candidate has obtained his degrees,

(iii) Number of unsuccessful attempts for the same post [Candidates who have been rejected in the past may be called only if there is a good reason, the reason to be recorded in writing.]

(iv) Specialisation, including micro specialisation,

(v) Professional service record - reputation of organization where experience has been earned, nature of job, current activities etc.

16. The Departments’ recommendations shall be placed before the Director for the final short-listing. The final list of candidates to meet the Selection Committee will be arrived at in a combined meeting of the Director, the ACoFAR, the HOD and at least three senior faculty members of the Department. In case of a lack of unanimity among the members, the director’s decisions shall be final for the purpose of calling a candidate to the interview. The different viewpoints, however, will be recorded in writing and placed before the selection committee who may record their own comments for information of the BOG. The decision of the Board on the selection shall be final and binding.

18. In addition to formal application, candidates will be required to submit reprints/preprints of publications and list of referees. The PIC will organize collection of references and review of publications by independent referees for short listed candidates, both internal and external.

19. The short listed candidates will be invited by the Chairman, ACoFAR or the Registrar for personal interview with the selections committee constituted in accordance with the NIT Act and the statutes of the respective institutes. In addition, the individual institutes may seek seminar presentation in the departments, and/or any other form of academic interaction with the faculty. All such interaction will be open to the faculty and students of the institute and will be well publicized in advance to invite a decent audience. The feedback of the faculty will be communicated to the selection committee by the HOD. Candidates located outside the country or otherwise not in a position of attending personal interview, may be interviewed over video conferencing or be selected in absentia at the discretion of the selection committee.

20. On completion of the interview, the selection committee will record its final recommendations with signature of every member present. The Director, as chairman of the committee will be responsible for writing the recommendation. There shall be no scope for retaining individual viewpoints or details of discussion. Any member(s) with a dissenting opinion may, however, record their observations. On a separate page(with a reference in the main page that will be presented by the Director to the BoG with his own comments on the observations.

20. The Selection Committee shall employ the same yard stick to evaluate all candidates for a post or AGP – external, internal, with or without a clear vacancy, and shall prepare a common panel of recommended candidates. Out of this panel, the vacant posts will be filled on the basis of merit without consideration of external or internal candidates.

The Selection Committee, at its discretion, may recommend retaining the panel for a maximum period of one year or next round of selection for the department, whichever comes earlier, so that vacancies caused during this period can be filled in order of merit. On completion of this period, only the internal candidates will be given promotion under CAS to be adjusted against future vacancies caused by retirement, resignation or creation of new posts, any time in future.

21. Recommendations of the selection committees will be placed before the BoG, along with details of sanctioned posts, reservation categories etc., for final approval and subsequent issue of appointment orders by the Registrar.

22. If a meeting of the BoG is not scheduled within a short period from the meeting of the selection committee, the director, with approval of the Chairman BoG, may seek the approval of members by circulation. While recommendation of the selection committee is awaiting approval of the BoG, the director may, at his discretion, inform successful candidates, but with a clear line stating that such information is awaiting approval of competent authority and is not legally binding.

23. All appointments - regular or CAS, internal or external, will be effective from the date of the Board meeting or any later date fixed by the Board. There shall, however, be no pre-dating of an appointment.

24. The following provisions will govern the selection and service conditions of new faculty recruited without a Ph. D. degree

(i) If sufficient numbers of meritorious candidates with Ph. D. degree are not available in any discipline or sub-discipline, candidates with M. Tech degree may be recruited as Assistant Professor on contract with AGP of Rs.6000.00 only.

(ii) The contract will be initially for a period of three years, extendable by two more years only on recommendation of a valid Selection Committee.

(iii) Such faculty, after joining the departments, must be enrolled in the Institute's own Ph. D. programme or be deputed to another Institute at the discretion of the Director, after considering the internal facilities available and the expertise needed in the department. The Institute will make available to the faculty the required equipments, consumables and travel support.

(iv) During the contract period, if an incumbent shows poor progress on his Ph. D. work or dereliction of duty in teaching, the contract may be terminated prematurely after an enquiry by the ACoFAR, with at least one external expert. Necessary clauses to this effect must be built into the contract at the beginning of the appointment.

(v) On award of Ph. D. degree, an incumbent will be given regular position with effect from the date of original contract appointment with probation of one year after regularisation. For all

future records, the starting point of service will be the date on which the contract service started originally.

(vi) During the contact period, the appointee will be put in pay band PB-3 with at least 2 non-compounded increments (for M. Tech. degree). He will also be entitled to the usual increments and allowances and to all other benefits such as P. F., Pension, future gratuity etc. at par with the facilities extended to regular faculty

Annexure V

Distribution of Faculty Posts among Departments

Every institute shall have only a finite member of faculty posts sanctioned by the ministry. The distribution of these positions among the departments will be flexible to dynamically maximize the number of faculty in position at any given time. It should be appreciated that institutes will be losers and the cause of education will be hampered if faculty positions which could be filled up in other departments are kept vacant simply because current market scenario is making faculty unavailable in a specific department. Instead of keeping vacant positions, if additional faculty are inducted in other departments, they will contribute to (a) elective courses in teaching, particularly those electives that are subscribed to by students across many departments, (b) research, (c) continuing education, (e) institute, hostel and SAC management etc. A vacant faculty post serves no one. At the same time, it is the responsibility of the Director, and of the Board, to ensure that no department starves of faculty when candidates are available and posts are used up elsewhere.

The following table may be taken as a guide for computing “normal faculty strength” in any department.

B Tech Programme (Annual Intake < 50)	= x
B Tech Programme (Annual Intake > 50)	= 1.5 x
Dual degree with existing M. Tech. specialization	= 0.1 x
Dual degree with exclusive M. Tech. specialization	= 0.2 x
Additional B Tech Programme(Each programme)	= 0.5 x
M Tech programme(Each programme)	= 0.5 x
M.Sc. (2 years) programme	= 0.5 x
M.Sc (5 years) programme	= x
MBA Programme (Annual Intake <50)	= x
MBA programme (Annual Intake >50)	= 1.5 x
MCA (3 Years) Programme	= x
Common theory courses for 1 st & 2 nd years (per subject)	= 0.2 x
Common practical courses for 1 st & 2 nd years (per course)	= 0.1 x

$$\text{Total} = nx$$

$$x = [\text{Sanctioned faculty strength}] \div n$$

Table (Annexure) 5

The normal strength of every department shall be computed based on the above scheme, additional factors taken into consideration, rounded and approved by the Institute Senate to serve as a guideline for all future recruitment. In case of serious disagreement among members the Senate, the decision of the BOG shall be binding.

The above prescription is based on a principle of equal sharing of teaching responsibility among all faculty members irrespective of rank. In contrast with the prescription of AICTE, professors of NIT are expected to take up a larger share of the teaching job, particularly in large classes and in common fundamental subjects. This principle has the merit of providing better education in basic subjects, It frees younger faculty to pursue research, particularly those who are enrolled in Ph.D programmes. Experienced faculty are also expected to spend less time in preparing for classes and spend the rest of the time in institute management.

Additional factors shall include, but will not be limited to, expected student strengths in common courses, open electives, being normally offered by the department, common subjects among M Tech specializations, strength of M Tech courses etc. In general, departments and centres can be classified into two or three groups depending on the above formula and faculty strength calculated for each group.

Annexure VI

Adjunct, Honorary, Chair, Emeritus, Contractual, Visiting, Ad hoc and Temporary Faculty

In addition to its regular faculty, an institute may augment its intellectual capital by hiring additional scholastic resource through different types of secondary faculty positions. Such faculty members contribute significantly to the department in terms of sharing teaching tasks and enhancing research output. Academic contributions and decisions (e.g. award of grades) of such faculty members shall have the same legal validity as those of regular faculty members. The primary purpose of hiring adjunct, honorary, chair, emeritus and visiting faculty is to receive the honour of hosting distinguished professionals and academicians, and not off-loading of routine teaching activity. In contrast, the primary purpose behind hiring ad hoc, temporary or contractual faculty is to provide routine teaching services, particularly when adequate number of regular faculty are not available.

The appointing authority of adjunct, honorary and chair professors shall be the senate while that for emeritus professors and contractual faculty shall be the BOG considering that in the latter case Government money needs to be spent on salary. Director may appoint ad hoc and temporary faculty, who need to be given appointment at short notice and do not constitute a long term responsibility of the institute. The following guidelines will give the administrative details of hiring additional faculty.

(a) Adjunct Faculty

Reputed scientists, engineers, physicians, advocates, artists, civil servants, bankers and other professionals, both serving and retired(from active service), can be inducted as Adjunct faculty. They will bring reputation to the institute, add valuable expertise and practical knowledge and complement the knowledge pool of existing faculty. The following will be some broad guide lines for selection of adjunct faculty.

- (i) They must be persons of repute, comparable to at least the top one third of the regular faculty in professional expertise and reputation in their own fields and organizations.
- (ii) Adjunct faculty will supervise student projects at all levels - UG to Ph.D., carry out sponsored research and consultancy, and teach courses, all these activities either independently or in collaboration with a regular faculty. They may also be members of departmental committees, if their professional experience becomes useful. While teaching courses, they may take responsibility of a full semester-long course or only a part thereof in collaboration with a regular faculty. The degree of involvement will be worked out mutually by the adjunct faculty and the Institute.
- (iii) Adjunct faculty will be appointed by the senate on recommendation of a committee headed by the director. Duration of appointment shall be between 1 and 5 years.
- (iv) Adjunct faculty will be provided with office room, secretarial services and other facilities depending on their involvement in academic activities.
- (v) They shall receive no salary, fee nor any other compensation for their services. All direct expenses such as travel, accommodation, preparation of lecture material etc. shall be reimbursed at actuals.

(vi) Adjunct faculty may receive financial support at the discretion of the director to attend conferences in India or abroad for presenting their work done in the institute, if in the opinion of the director, he has contributed significantly to the institute's academic programme.

Honorary Faculty

Institutes may honour distinguished academicians including its own retired faculty members by conferring on them the status of "Honorary Faculty". This status will be same as adjunct faculty except that:-

(i) Honorary faculty will be drawn from distinguished persons retired from active service, including the Institute's own retired faculty, who commit to be engaged in substantial scholastic activity using facilities of the Institute and contribute academic services to the institute without compensation.

(ii) Duration of appointment shall be "for 5 years" or "for life".

(iii) Directors of institutes appointed by the visitor in accordance with the provisions of

NIT Act and statutes will automatically be "Honorary faculty for life" on completion of their tenure of service, irrespective of their level of engagement in institute activity in future.

Chair Professors

The Board may create a position of chair professor in a given department with or without a fixed specialization from money donated by an external agency or person. If sufficient funds are available to pay full salary and other benefits from the interest money, a new faculty post with terms identical to regular posts may be created. On the other hand, if limited funds are available, an existing regular faculty position or a secondary position under adjunct, honorary, visiting or contractual categories may be declared as an external chair where the donation received from the external agency will provide such benefits as top-up salary, travel grant or any other benefit to the incumbent.

Professor Emeritus

Faculty superannuating from service in NITs and comparable institutions may be inducted by the Board as Professor Emeritus for a maximum period of 3 years. This provision is limited to faculty with suitable externally sponsored projects or comparable activities, in addition to shouldering normal teaching responsibilities. Such appointment shall be made against sanctioned faculty posts only.

Faculty on Contract

When regular faculty positions cannot be filled, the Board at its discretion, may fill up sanctioned faculty positions "on contract", where the terms of separation will be far easier than those of regular faculty. Other facilities and mode of selection, to the extent possible, will be same as those for regular faculty. Examples of contractual faculty will include Assistant Professors without Ph.D. degree under the 3 tier system or Assistant Professors during the first 3 years after Ph.D. under the 4 tier system, faculty considered in absentia, and distinguished professors and engineers/scientists who have retired from other organizations.

Visiting Faculty

Academic personnel from universities, institutes, R&D labs, industry or Government in India or abroad, including those on sabbatical leave from other institutions or retired, may be inducted into

the institutions for brief periods (Maximum 2 years), with or without remuneration. Such faculty members are expected to work full time taking academic responsibilities at par with regular faculty members. They may be appointed by Director on recommendation of the Head of the department, and a counterpart faculty member in the department who will serve as a host. Visiting faculty may be provided with mutually agreed honorarium and facilities (e.g. residential accommodation) on discretion of Director.

Ad. hoc appointments

To meet urgent need of faculty or to retain a brilliant candidate, the Director is empowered to make ad hoc appointment against sanctioned posts at all levels. Such appointment can be done for a maximum duration of 12 months, and shall not be extended even with breaks. A reasonable pay band, pay and AGP may be worked out, and increment may also be given as per rules. This pay shall not be binding on the selection committee, which may make its own decision, the formal appointment, if at all, shall carry its own pay unrelated to the ad hoc pay. Facilities such as residential accommodation, travel etc., normally available to faculty members, may be extended at discretion of Director. The director will make his decision basing on the recommendation of a small committee of senior faculty colleagues which will include at least one internal Board member, and one external subject expert. A Ph.D. degree with a superior academic career is a minimum requirement for ad hoc appointment at Assistant Professor level. Commensurate work experience in institutions of repute is necessary for higher posts.

Temporary Faculty

The director may recruit "Temporary faculty" against sanctioned posts to tide over serious shortage of faculty to handle UG & PG teaching load. This will be possible only in departments where the number of faculty in position, not counting teachers on long leave, is below 0.75 x normal strength. The candidates need to have at least a Master's degree in Engineering or a doctorate in science/humanities with first class(60% marks or (GPA 6.5/10) at both bachelor's and master's level. Selection can be made on recommendation of a committee of faculty members that must include at least one internal board member and one faculty member of another department. Presence of an external subject expert is not essential.

Duration of appointment shall be one semester to start, and may be extended on semester to semester basis on recommendation of the HOD. Maximum duration of appointment in the entire career of a person shall be limited to 5 semesters. A consolidated remuneration, proportional to the assigned duties may be worked out on mutual agreement. The temporary faculty may be permitted to work full time or part time depending on the remuneration paid to him. In addition to the consolidated remuneration, director may, at his discretion, extend residential accommodation, telephone, travel and other facilities in absentia, and distinguished professors and engineers/scientists who have retired from other organizations.

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NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

HAZRATBAL, SRINAGAR, KASHMIR-190006 (J&K)

"Annual Assessment Report for the Faculty Staff

For the Year _____"

PART I

(To be filled by the Administration)

1. Name of the staff member _____
2. Employment No. _____
3. Date of First Appointment _____
4. Department _____
5. Present post held _____
6. Date from which present post held _____
7. Status Permanent/Temporary/on Probation
8. Pay-Band _____
9. AGP _____
10. Name of immediate officer and his designation _____

Signature of the Registrar

PART II

(To be filled by the staff member - additional sheets may be used wherever necessary) - Centre

1. a. Highest Academic qualification _____
- b. Any additional qualification which has been
acquired during the year under review _____
2. Membership of Professional/Scientific
Societies _____
3. Teaching Load/Week with course name and class :

	Lectures	Tutorials	Practicals	Total
(Enclose copy of Time Table)				
3.1. Undergraduate Classes :	_____	_____	_____	_____
3.2. Postgraduate Classes :	_____	_____	_____	_____

4. Project/Research Supervision :

Give brief description of each project : names of the students and co-supervisors:

	Project/Thesis	Title	No. of Students	Co-Supervisor
4.1.B. Tech	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
4.2. M. Tech/M.Sc.	_____	_____	_____	_____
4.3. Ph. D.	_____	_____	_____	_____

5. Papers Published during the period of assessment : (Give details of the title of the paper, with Coauthors, (if any), details of the Journals/Conferences, Date etc.

6. Contributions to the Laboratory Development : (Give the name of the Laboratories/equipment developed etc.)

7. Contribution to the Course Development : (Give the details about contribution to any new course introduced, modifications made in the existing course etc.)

Name of R & D Scheme/ Consultancy Work.	Agency	Date from which Scheme Started	Research Staff Engaged	Progress made	Expected Date of Completion

9. Publication of Book Development of teaching aids or / Laboratory manuals / Special lecturers/Participation in or Organization of Seminars, symposia, conferences, Summer and Winter Schools and other Continuing Educational programmes and Refreshers courses.

10. Contributions to the Social corporate life on the Campus _____

11. Contribution to the Department/Institution Administration :

11.1. Department _____

11.2. Institute _____

12. Additional contributions not covered above and which are relevant to the assessment of your activities

Dated : _____

Signature of Staff Member

Forwarded for further necessary action. My remarks about the staff member are given in Part-II of this Report.

Dated : _____

Head of the Department

PART III

(To be filled in by the Head of the Department)

1. Personal Attributes :- _____

- | | |
|--|--|
| 1.1. Physical Capacity for duties of the Post held | - Diligent / Industrious / Toiler / Slack |
| 1.2. Temperament | - Self controlled / Restrained / Excited / Panicky |
| 1.3. Zeal and Energy | - Indefatigable / Persevering |
| 1.4. Liveliness | - Spirited / Cheerful / Dull / Gloomy |

- | | |
|------------------------------------|---|
| 2. Group Work | |
| 2.1. Attitude towards colleagues | - Friendly / Cooperative / Obstructive / Individualistic / Selfish / |
| 2.2. Attitude towards Subordinates | - Humane / Considerate / Sympathetic / Indifferent / Inconsiderate /
Hard / Soft |
| 2.3. Loyalty and Fidelity | - Faithful / Obedient / Conscientious / Dutiful / Easy Going /
Irresponsible / Obstinate |

2.4. Leadership Attributes :-

Item	A	B	C	D	E
Capability to exert Influence					
Tactfulness					
Maturity					
Org. Capacity					
Courage					
Initiative					
Firm & imperturbable Attitude in difficult times.					

A: Excellent B: V. Good C: Good D: Satisfactory E: Unsatisfactory

- 2.5. Relations with non - officials (if Duties involve such relations) - Considerate / Willing / Helpful / Sympathetic / Indifferent / Rude
- 2.6. Promptness in disposal of work - Very prompt / Fairly prompt / Not prompt
- 2.7. Speed a decision - Very quick / Fairly quick / Sure / Hesitant / Indecisive

Note : The adjectives given above are suggestive only. It is open to the Reporting Officer to use any other words which more correctly described the officer reported on.

3. Teaching capability :

- 3.1. Ability to interest the students and to arrange his subject matter So as to cover all the main parts of it. Exceptional / Above average / Average / Below average :
- 3.2. Ability to maintain discipline in the class room and outside Exceptional / Above average / Average / Below average.
- 3.3. Reputation amongst students Exceptional / Above a average / Average / Below average.

4. Does the officer exhibit :

- a. Patience . Yes / No
- b. Tact Yes / No
- c. Courtesy Yes / No
- d. Impartiality while dealing with students, public, Colleagues and subordinates with who he comes in contact.

5. Has the officer any special characteristics and or any outstanding merits or abilities which would justify his advancement and special selection for higher appointment in the service.

6. a. If the Officer is decidedly below average (state the grounds for opinion).

b. Have short coming if any been brought to his notice in the past and to which extent has he shown improvement in that behalf? (Please attach correspondence made)

7. Additional remarks, if any :

Submitted to the Director for perusal and orders please.

Dated _____

Signature, Name and Designation of
Reporting Officer

Director




National Institute of Technology Srinagar
HAZRATBAL SRINAGAR-190006 Kashmir
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PART-C

DECLARATION

I undertake that the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, and NBA expert visit guidelines in force as on date; and the institute shall fully abide by them.

It is submitted that information provide in this Self-Assessment Report is factually correct. I understand and agree that an appropriate disciplinary action against the institute will be initiated by the NBA in case any false statement/information is observed during pre-visit, visit, post-visit, and subsequent to grant of accreditation.


19/06/2018
Prof. (Dr.) Rakesh Sehgal
DIRECTOR
Director
National Institute of Technology
Srinagar (J&K)

Date: June 20, 2018

Place: NIT Srinagar