

SELF ASSESSMENT REPORT (SAR)

For

Accreditation of Bachelor of Technology (B.Tech.) in Mechanical Engineering

By

National Board of Accreditation

NBCC Place, 4th Floor East Tower, Bhisham Pitamah

Marg, Pragati Vihar New Delhi 110003

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**MECHANICAL ENGINEERING DEPARTMENT
NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR
Hazratbal, Srinagar – 190 006, J&K (India)**

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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 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/106/2002 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/106/2002 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/106/2002
16	M.Tech., Communication and		2004	25				

	information Technology						May 19 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/106/2002 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	Accredited by NBA F. NO NBA/ ACCR/106/2002 May 19 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. 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 Programs	M	9	9	9	10	9	3
	F	3	3	3	1	3	3
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 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
सर्वोच्च 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)

K. K. Sharma
(K. K. Sharma)
PA

128-C, SHASTRI BHAVAN, NEW DELHI - 110 015
TELEPHONE : 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)
(B.K. Ray)
Desk Officer
Tel: 23070177
FAX: 23074094

Encl: As above.

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

(B.K. Ray)
(B.K. Ray)
Desk Officer

R/I For a/c M.
AC 25/8/2003
Do 28/8/2003
25/8
BOD
K.C.

PART B: Criteria Summary**Name of the program: Mechanical Engineering**

Criteria No.	Criteria	Mark/Weightage	
		Max.	Claimed
	Program Level Criteria		
1	Vision, Mission and Program Educational Objectives	50	47
2	Program Curriculum and Teaching– Learning Processes	100	95
3	Course Outcomes and Program Outcomes	175	155
4	Students' Performance	100	91
5	Faculty Information and Contributions	200	154
6	Facilities and Technical Support	80	80
7	Continuous Improvement	75	75
	Institute Level Criteria		
8	First Year Academics	50	49
9	Student Support Systems	50	50
10	Governance, Institutional Support and Financial Resources	120	120
	Total	1000	916

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)

INSTITUTE**About NIT Srinagar**

National Institute of Technology, Srinagar is one of the premier Educational Institutes in the Northern Regions of the country. It was established in 1960 and has been one of the eighteen Regional Engineering Colleges sponsored by the Govt. of India during the 2nd Plan. The Institute acquired the status of National Institute of Technology with deemed to be University status during August 2003 and attained full autonomy in its Academics.

The Institute is situated at the banks of world-famous Dal Lake, with the far-famed Hazratbal Shrine on another side of the campus. NIT Srinagar is a residential Institute with accommodation facility in Hostels and Staff-Quarters. There are four Boys and one Girls hostel which swallows about 1500 boys and 200 girls. Besides running the B. Tech. Programme the Institute also offers M. Tech programme in many streams. In addition to that, a large number of students are registered for M. Phil and Ph.D.. Programmes.

Facilities and amenities are available at the institution such as NCC, NSS, Bank, Consumer cum Society, Shopping Complex, Recreational Centre, Dispensary with Ambulance, Guest House, Students Activity Centre, Gymnasium, Internet Centre, Telephone Booths, Fax Services, Diesel Generator, and Bus Facility. The Institution has an Industry Interaction cell which was established in 1989 with the aim to remain at the fore-front on the Scientific and Technological development and to share its experience with industries in utilizing. Man-power and other resources are available at the Institute effectively with the assistance of the participating industries. The Institute has one of the best technical library in J&K State. It has a collection of over 60,000 books on Engineering Science and humanities and about 6,000 bound volumes/Journals, both foreign and Indian. The library remains open from 9.00 a.m. to 10.p.m. It has on line repository of A.S.C.E, A.S.M.E.A.E.L, J.C.C.C etc. in addition to journals through I.N.S.E.S, COMSORTIEM. It also has a collection of I.S.I codes, in the C.D-Rom format.

VISION OF THE INSTITUTE

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 STATEMENT OF THE INSTITUTE

- (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.

QUALITY POLICY OF THE INSTITUTE

NIT Srinagar shall strive to impart knowledge, hone skills and nurture creativity for all stakeholders.

DEPARTMENT

About Mechanical Engineering Department

The Mechanical Engineering Department of NIT Srinagar has been established in year 1960 (erstwhile REC Srinagar). Over last 57 years we have enriched our knowledge and expertise in the broad area of Mechanical Engineering. We have a well-established B. Tech. program in Mechanical Engineering. At Master's level we offer M. Tech in two streams namely Mechanical System Design and Industrial Tribology and Maintenance Management (with research component). The sanctioned student's strength of B. Tech., M. Tech in MSD & ITMM (through valid GATE score) are 77, 20 & 21 respectively. Moreover 5 sponsored seats are available for desirous candidates to pursue M. Tech course in the relevant streams each. Currently 52 students are enrolled in the PhD program working on different research problems. The curriculum of the department lays emphasis on fundamentals with a view to impart problem solving skills and related knowledge. Besides core courses, department offers some optional courses to allow students to have their choice based credits. The sensitivity to the ever changing technological developments is reflected in regular Board of Studies meetings of the department wherein the changes in curriculum are ensured by taking all the stake holders on board. Department gives full encouragement to all B. Tech., M. Tech and PhD scholars to get involved in challenging projects/ tasks. Collaborative and

Interdisciplinary research is also given due place. Funding for research in last 3 years has been approximately 11.5 crores used for removal of obsolescence and creation of new Laboratories/ Facilities. Currently the department is being headed by Prof Sheikh Nazir Ahmad. The department's strength is its qualified faculty with high calibre and credentials. The perseverance and persistence of our faculty in various research areas has been acknowledged through their publications (in reputed journals)/awards. The mission of the faculty is to inspire young budding engineers in their hot career pursuits, by igniting the spark of zeal to learn more. The website provides a bird's eye view of the departmental activities on various fronts (both academic and research). The website provides all its visitors necessary and sufficient information succinctly and crisply. Further information, if needed can be obtained through e-mail to the concerned faculty.

VISION OF THE DEPARTMENT

To nurture mechanical engineers with passion for professional excellence, ready to take global challenges and to serve the society with high human values.

MISSION STATEMENT OF THE DEPARTMENT

- (1) To provide facilities and infrastructure for academic excellence in the field of mechanical engineering.
- (2) To inculcate in the student the passion for understanding professionalism, ethics, safety, sustainability and then actively contribute in the society.
- (3) To nurture creativity and encourage innovative solutions to real life challenging problems in mechanical engineering students.
- (4) To prepare student for lifelong learning in global perspective.

1.2 State the Program Educational Objectives (PEOs)

(5)

(State the PEOs (3 to 5) of program seeking accreditation)

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: To prepare students to get employment, profession and/or to pursue post-graduation and research in mechanical engineering discipline in particular and allied engineering fields in general.

PEO2: To prepare students to identify and analyse mechanical engineering problems in an iterative approach that involves defining, quantifying, testing and review of the identified problem.

PEO3: To inculcate ethical practices in students and to establish understanding of professionalism, safety, sustainability and their duties in the society.

PEO4: To prepare students to plan, organize, schedule, execute and communicate effectively as an individual, a team member or a leader in multidisciplinary environment.

PEO5: To provide to students, an academic environment that makes them aware of excellence in field of Mechanical Engineering and enables them to understand significance of lifelong learning in global perspective.

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

Locations where the Vision, Mission, PEOs and PSOs are published:

Sr. No.	LOCATION	INSTITUTE		DEPARTMENT			
		Vision	Mission	Vision	Mission	PEO	PSO
1	Department news letter	✓	✓	✓	✓	✓	✓
2.	Course file	✓	✓	✓	✓	✓	✓
3.	Academic Scheme	✓	✓	✓	✓	✓	✓
4.	Lab manual	✓	✓	✓	✓	✓	✓
5.	Conference workshop /Brochures	✓	✓	✓	✓		

Locations where the Vision, Mission, PEOs and PSOs are disseminated:

Sr. No.	LOCATION	INSTITUTE		DEPARTMENT			
		Vision	Mission	Vision	Mission	PEO	PSO
1	Institute Website	✓	✓	✓	✓	✓	✓
2.	Mechanical Department Office	✓	✓	✓	✓	✓	✓
3.	HOD room	✓	✓	✓	✓	✓	✓
4.	Faculty Room	✓	✓	✓	✓	✓	✓
5.	Class rooms	✓	✓	✓		✓	✓

6.	Laboratories	✓	✓	✓	✓	✓	✓
7.	Department notice board	✓	✓	✓			
8.	Seminar Hall	✓	✓	✓	✓	✓	✓

Apart from this, Vision, Mission and PEOs and PSOs are disseminated to all the stakeholders of the programs through faculty meetings, student awareness workshops, student induction programs, placement and training activities and parent-teachers meetings at regular intervals.

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

(Articulate the process involved in defining the Vision and Mission of the department and PEOs of the department.)

The department established the Vision and Mission through a consultative process involving the stakeholders of the Department, the future scope of the department and the societal requirements as shown in figure 1.1. In establishing the Vision and mission of the Department the following steps were followed.

Step 1:	The Vision and Mission statements were first proposed by the committee setup by the department under chairmanship of Head of the department.
Step 2:	Proposed Vision and Mission statements have been circulated among the faculty members of the departments and the stake holders.
Step 3:	Deliberations on the suggestions received regarding new draft of Vision and Mission statements involved all the faculty members of the department. The Vision and Mission Statements were modified as per feedback received.
Step 4:	Discussion with external members (Two Professors from academia) in light of Steps 1-3.
Step 5:	Vision and Mission statements were finalized.
Step 6:	Board of Studies approved the Vision and Mission Statements under the chairmanship of Head of the department.
Step 7:	Approved by Chairman/ Senate

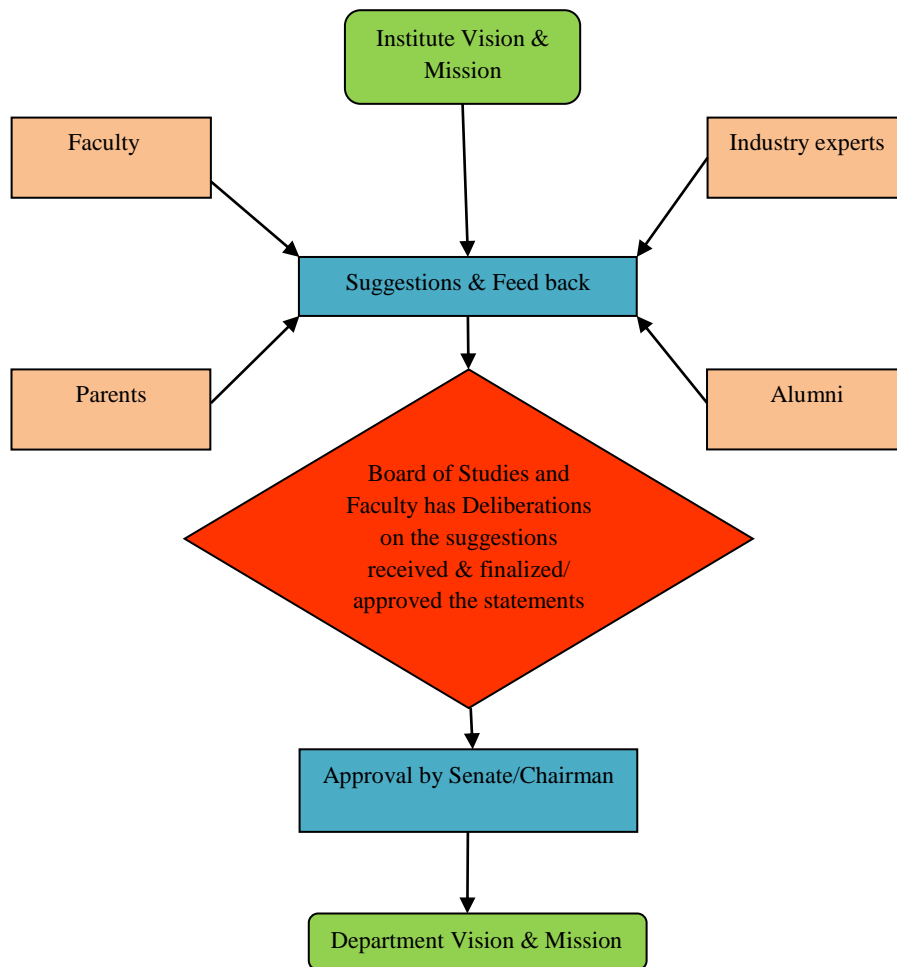


Figure 1.1: Process of Establishing Vision and Mission of the Department.

Process for defining the PEOs of the Department

For defining the Program Educational Objectives (PEO) of the Mechanical Engineering department, the following steps were followed. (Figure 1.2)

Step 1:	The Program Educational Objectives (PEO's) of the department were first outlined by the committee setup by the Head of the Department.
Step 2:	Proposed Program Educational Objectives (PEO's) have been circulated among the faculty members of the department and the stake holders.
Step 3:	Discussion on the suggestions received on Program Educational Objectives by all the faculty members of the department and the committee setup by the Head of the Department. The Program Educational Objectives were modified as per feedback.
Step 4:	Discussion with external members (Two Professors from academia) in light of Steps 1-3.
Step 5:	Program Educational Objectives were finalized
Step 6:	Board of Studies approved the PEO's under the chairmanship of Head of the Department.
Step 7:	Approved by Chairman/ Senate

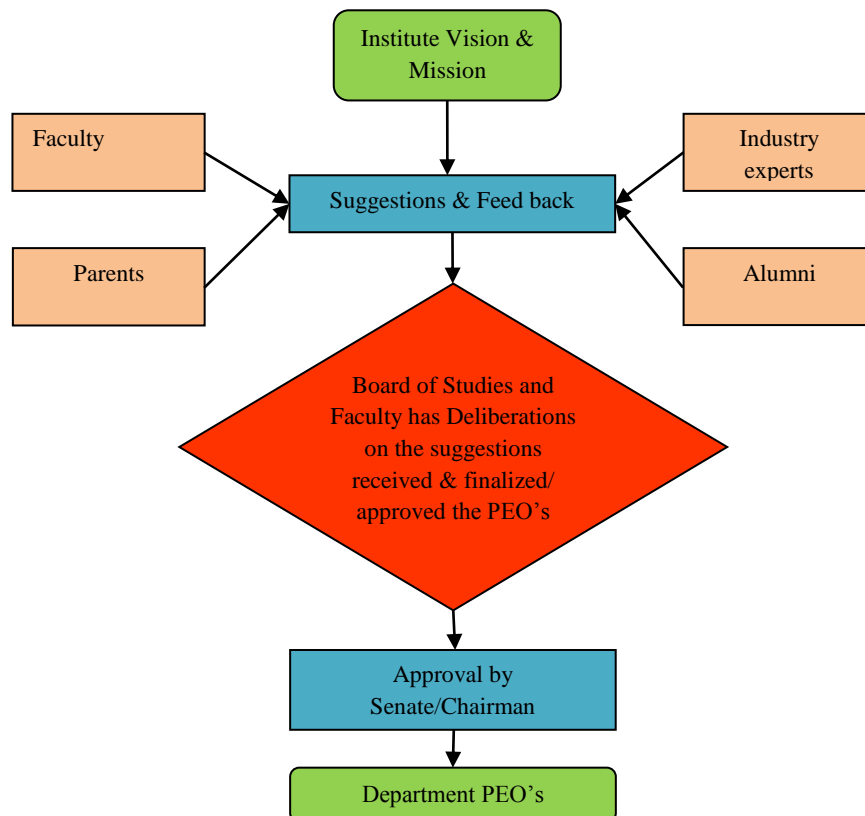


Figure 1.2: Process for defining the PEOs of the Department

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

Mission Statements		M1	M2	M3	M4
PEO statements		To provide facilities and infrastructure for academic excellence in the field of mechanical engineering.	To inculcate in the student, the passion for understanding professionalism, ethics, safety, sustainability and then actively contribute in the society.	To nurture creativity and encourage innovative solutions to real life challenging problems in mechanical engineering students.	To prepare student for lifelong learning in global perspective.
PEO1	To prepare students to get employment, profession and/or to pursue post-graduation and research in mechanical engineering discipline in particular and allied engineering disciplines in general.	3	3	2	3
PEO2	To prepare students to identify and analyse mechanical engineering problems in an iterative approach that involves defining, quantifying, testing and review of the identified problem.	2	3	3	3

PEO3	To inculcate ethical practices in students and to establish understanding of professionalism, safety, sustainability and their duties in the society.	2	3	2	3
PEO4	To prepare students to plan, organize, schedule, execute and communicate effectively as an individual, a team member or a leader in multidisciplinary environment.	3	2	3	3
PEO5	To provide to students, an academic environment that makes them aware of excellence and enable them to understand significance of lifelong learning in global perspective.	3	2	2	3

Note: M1, M2.... Mn are distinct elements of Mission Statement. Enter correlation levels 1, 2 or 3 as defined below:
 1: Slight (low) 2: Moderate (Medium) 3: Substantial (High). If there is no correlation, put “-”

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 curriculum is being designed. Technological developments constitute an important criterion while designing the program curriculum. The faculty members design the course content to meet out the requirement of COs. 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 Departmental Assessment Board (DAB), chaired by the HOD. Again the curriculum is subjected evaluation so that the contents fulfil 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 an 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 other institute. The process for designing the program curriculum is illustrated in Figure 2.1

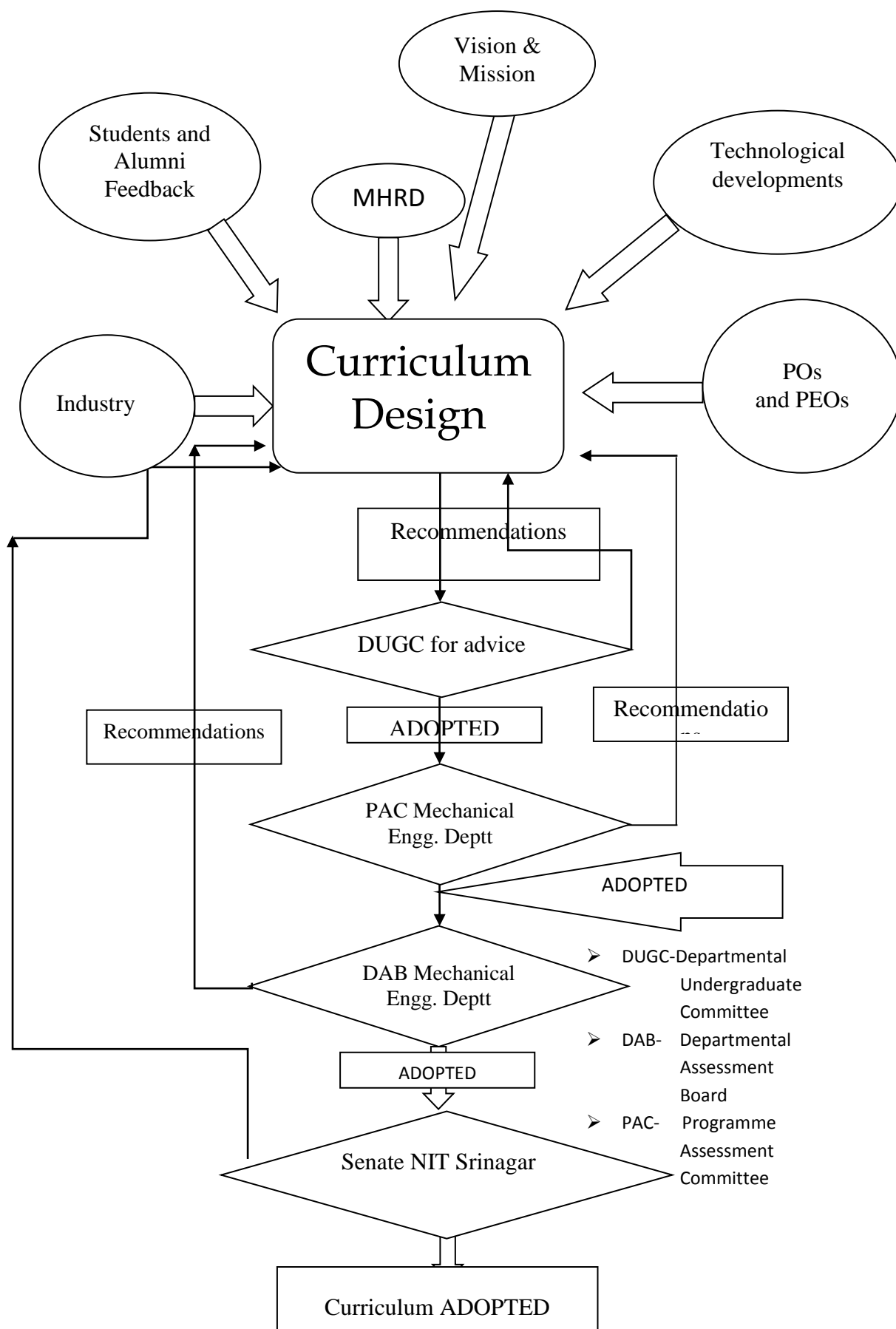


Figure 1: Process of designing the programme curriculum

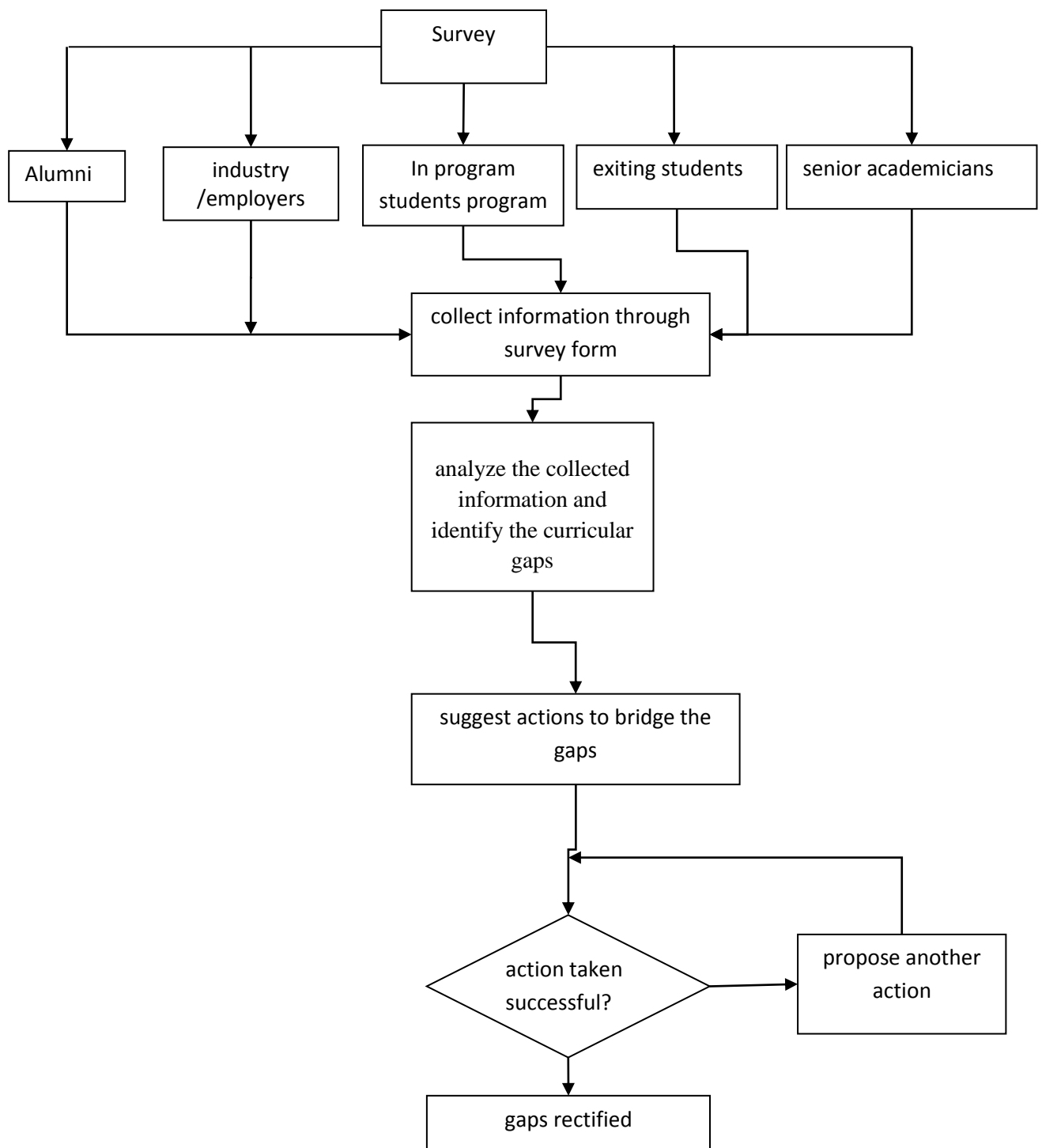


Figure 2: Flow chart showing identification of curriculum gaps

2.1.2 Structure of the Curriculum

(5)

Sem.	Course code	Course Title	Total Number of contact hours				Credits
			L	T	P	Total	
1 st	PHY 101	Physics	2	1	0	3	3
	PHY 102 P	Physics Lab I	0	0	2	2	1
	CHM 101	Chemistry	3	1	0	4	4
	CHM 101L	Chemistry Laboratory I	0	0	2	2	1
	IT101	Computer Fundamentals	3	0	0	3	4
	CIV 102	Engineering Drawing	2	0	4	6	4
	HSS 101	Communication Skills & Presentation	1	1	0	2	4
	MTH 101	Mathematics I	3	2	0	5	4
	WSP I	Workshop Practice I	0	0	0	3	2
2 nd	CHM 201	Chemistry II	3	1	0	4	4
	CHM 201L	Chemistry Laboratory II	0	0	2	2	1
	CSE 201	Computer Programming	3	0	0	3	3
	CSE 202P	Computer Programming Lab	0	0	2	2	1
	CIV 201	Engineering Mechanics	2	0	4	6	4
	HU 201	Introduction to Social Sciences	4	0	0	4	4
	MTH 201	Mathematics II	3	1	0	4	4
	MEC 201	Machine Drawing	1	0	3	4	3
	PHY 201T	Physics Theory	2	1	0	3	3
	PHY 202P	Physics Lab II	0	0	2	2	1
3 rd	MEC 301	Fundamental of Dynamics	2	1	0	3	3
	MEC 302	Mechanics of Materials-I	3	1	0	3	3
	MEC303	Fluid Mechanics	2	1	0	3	3
	MEC304	Engineering Thermodynamics	2	1	0	3	3
	MEC305	Manufacturing Technology	2	1	0	3	3
	MEC306	Engineering Graphics & Computer Modeling	0	0	6	3	3
	MTH 304	Mathematics	2	0	0	4	2
	MEC302P	Mechanics of Materials-I Lab	0	0	2	2	1
	MEC303P	Fluid Mechanics Lab	0	0	2	2	1
	MEC305P	Manufacturing Technology-I Lab	0	0	2	2	1
4 th	MEC 401	Materials Science	2	1	0	3	3
	MEC 402	Mechanics of Materials-II	3	1	0	4	4
	MEC 403	Theory of Machines-I	3	1	0	4	4
	MEC 404	Applied Thermodynamics-I	2	1	0	3	3
	MEC 405	CAM & Industrial Automation	3	1	0	4	4

	ELE 406	Electrical Engineering Technology	2	1	0	3	3
	MEC 403P	Theory of Machines-I Lab	0	0	2	2	1
	MEC 404P	Applied Thermodynamics-I Lab.	0	0	2	2	1
	MEC 405P	CAM & Industrial Automation lab	0	0	2	2	1
	ELE 407P	Electrical Engineering Technology Lab	0	0	2	2	1
5 th	MEC 501	Theory of Machines-II	3	1		4	4
	MEC 502	Machine Design-I	3	1		4	4
	MEC 503	Hydraulic Machinery	2	1		3	3
	MEC504	Heat Transfer	2	1		3	3
	MEC505	Industrial Engineering-I	3	1		4	4
	ECE 508	Industrial Electronics	2	1		3	3
	MEC 501P	Theory of Machines-II Lab	0	0	2	2	1
	MEC 504P	Heat Transfer Lab	0	0	2	2	1
	MEC 505P	Industrial Engineering-I Lab			2		
	ECE 508P	Industrial Electronics Lab	0	0	2	2	1
6 th	MEC 601	Automatic Control	3	1		4	4
	MEC 602	Machine Design-II	3	1		4	4
	MEC 603	Fundamentals of Tribology	3	1		4	4
	MEC 604	Linear Optimization in Engineering	3	1		4	4
	MEC 605	Introduction to Mechatronics	3	1		4	4
	MEC 606	Seminar	0	0	6	6	3
	MEC 603P	Fundamentals of Tribology Lab	0	0	2	2	1
	MEC 605P	Mechatronics Lab	0	0	2	2	1
7 th	MEC 701	Basic Fracture Mechanics	2	1	0	3	3
	MEC 702	Measurements and Instrumentation	3	1	0	4	4
	MEC 703	Industrial Engineering-II	3	1	0	4	4
	MEC 704	Applied Thermodynamics-II	3	1	0	4	4
	MEC705	Computer Applications in Mech. Engg. (CAME)	2	1	0	3	3
	MEC703P	Industrial Engineering-II Lab	0	0	2	2	1
	MEC 705P	CAME Lab.	0	0	2	2	1
	MEC 706	Final Year Project	0	0	6	6	3
	MEC 707	Practical Training & Professional Viva	0	0	0	0	2
8 th	MEC 801	Production & Operations Management	3	1	0	4	4
	MEC 802	Internal Combustion Engines	3	1	0	4	4
	MEC 803	Departmental Elective-I	2	1	0	3	3

	MEC804	Departmental Elective-II	2	1	0	3	3
	MEC 805	Final Year Project	0	0	20	20	10
	MEC 802P	I.C.Engine Lab	0	0	2	2	1

Elective –I		Elective -II	
Course No.	Course name	Course No.	Course name
MEC80*	Value Engineering	MEC80*	Power Plant Engineering
MEC80*	Theory of Elasticity	MEC80*	CAD of Thermal Systems
MEC80*	Introduction to Acoustics	MEC80*	Introduction to MEMS
MEC80*	Continuum Mechanics	MEC80*	

Table B. 2.1.2

Table 1. Curriculum structure

2.1.3 State the components of the curriculum

(5)

Course component	Curriculum content (% of total number of credits of the program)	Total number of contact hours/week	Total number of credits
Basic sciences	13.12	34	29
Engineering sciences	16.74	40	37
Humanities and social sciences	3.61	8	8
Program core	55.65	135	123
Program electives	2.71	6	6
Open electives	Nil	Nil	Nil
Project(s)	5.88	26	13
Internships/ seminars	2.26	6	5
Total number of credits			221

2.1.4 State the process used to identify extent of compliance of the curriculum for attaining the program outcomes and program specific outcomes. (10)

Overview of section 2.1.4

- The process that identifies periodically documents and demonstrates extent of compliance of program curriculum for attaining the POs and PSOs.
 - Institute curriculum structure
 - Allocation of hours
- Identification process of the curricular gaps
 - Surveys
 - Alumni Survey
 - In program students survey
 - Faculty survey
 - Industry survey

Survey Forms

1. Alumni Survey

National Institute of Technology Srinagar Alumni Survey Form		
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		
Alumni name		
Year of Graduation		
Mailing address		
Placement	Before/after graduation	Core/Software
Name of the Company		
Please rate each of the following skills, abilities or attributes in terms of their importance to state how well your education at Mechanical Engineering Department, National Institute of Technology, Srinagar prepare you for these.		
Skills, Abilities and Attributes	Scale (1 to 5) Excellent to poor	
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		
Awareness 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 English language in both communicative and technical forms		
Awareness of the need for life-long learning (Seeking further education, self-learning, Membership in professional societies)		
Project Management and Finance		
Signature	Suggestion if any:	

2. Employer Survey

Mechanical Engineering Department <u>National Institute of Technology, Srinagar</u> EMPLOYER SURVEY FORM			
<p>The purpose of this survey is to obtain Employer's input on the quality of education of undergraduate programs in NIT, Srinagar. Your sincere cooperation would enable us to improve the quality of our graduates as per your requirements</p>			
Name of Company/ Organization			
Mailing address			
Sector Private/Public/Academia			
What are the pertinent employability skills to stay updated in current industry trends and thereby improve the quality of the undergraduate program?	Logical Thinking	Good Aptitude	Excellent Communication
<p>Rate the NIT Srinagar Graduates working in your organization using the following criterion. Put tick mark Knowledge, Skills, Abilities, Attitude and other Attributes expected out of NIT Srinagar graduates.</p>			

No.	Overall, are you satisfied with	Excellent (3)	Good (2)	Satisfied (1)
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 life-long 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 differentiation of management techniques and possession of leadership skills that enable successful function of multi-disciplinary teams.			

Signature:
Name and Designation

3. In Program Students Survey

National Institute of Technology, Srinagar Mechanical Engineering Department In-Program Student Survey Form			
Name:		Year Passed out:	
Email:		Phone	
Assessment of Knowledge, Skills, Abilities and Attributes presently acquired at NIT Srinagar			
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 the your choice)			
1	Ability to acquire and apply knowledge of basic mathematics, science and engineering fundamentals. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
2	Ability to apply analytical skills to engineering problems. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
3	Ability to conduct experiments, analyse data, and present results. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
4	Ability to conduct independent research for information required in engineering problem Solving. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
5	Ability to use modern technologies and tools necessary for practice. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
6	Ability to understand global issues related to engineering. <i>If not satisfied give your suggestions to improve.</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
7	Understand the importance of ethical and professional responsibility. <i>If not satisfied give your suggestions to improve</i>		

	Extremely Satisfied	Satisfied	Not Satisfied
8	An ability to function on multi-disciplinary teams. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
9	An ability to communicate effectively. <i>If not satisfied give your suggestions to improve</i>		
	Extremely Satisfied	Satisfied	Not Satisfied
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>		
	Extremely Satisfied	Satisfied	Not Satisfied

4. Exiting Students Survey

Mechanical Engineering Department National Institute of Technology, Srinagar Exiting Students Survey			
Name:		En. Roll. No:	
Phone No.		Email:	
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.			
1	Basic knowledge in mathematics, science, engineering and humanities.		
	Extremely Satisfied	Satisfied	Not Satisfied
2	Ability to identify, design, analyse and solve mechanical engineering problems		
	Extremely Satisfied	Satisfied	Not Satisfied
3	Ability to identify, design, analyse and solve mechanical engineering problems		
	Extremely Satisfied	Satisfied	Not Satisfied
4	Design/ development of complex engineering problems and their solutions		
	Extremely Satisfied	Satisfied	Not Satisfied
5	Use of research-based knowledge and research methods		
	Extremely Satisfied	Satisfied	Not Satisfied
6	Demonstrate the ability to apply advanced technologies to solve contemporary and new problems		

	Extremely Satisfied	Satisfied	Not Satisfied
7	Awareness to apply engineering solutions in global, national and societal contexts		
	Extremely Satisfied	Satisfied	Not Satisfied
8	Understanding professional engineering solutions in societal and environmental contexts		
	Extremely Satisfied	Satisfied	Not Satisfied
9	Understanding professional engineering solutions in societal and environmental contexts		
	Extremely Satisfied	Satisfied	Not Satisfied
10	Understanding of professional and ethical responsibility		
	Extremely Satisfied	Satisfied	Not Satisfied
11	Ability to function as an effective member in multi-disciplinary teams		
	Extremely Satisfied	Satisfied	Not Satisfied
12	Proficient in English language in both communicative and technical forms		
	Extremely Satisfied	Satisfied	Not Satisfied
13	Demonstrate the ability to choose and apply appropriate resource management techniques		
	Extremely Satisfied	Satisfied	Not Satisfied
14	Capable of self-education and clearly understand the value of updating their professional knowledge to engage in life-long learning		
	Extremely Satisfied	Satisfied	Not Satisfied
15	Ability to integrate theory and practice to construct systems of varying complexity		
	Extremely Satisfied	Satisfied	Not Satisfied
16	Ability to apply mechanical engineering skills, tools and mathematical techniques to analyse, design and model complex systems		
	Extremely Satisfied	Satisfied	Not Satisfied
17	Ability to design and manage small-scale projects to develop a career in mechanical engineering		
	Extremely Satisfied	Satisfied	Not Satisfied

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:

- Curricular mapping
 - Tools for evaluating the extent to which the POs and PSOs are achieved
 - Process to identify the curricular gaps using curricular mapping
 - Identifying gaps in the curriculum from curriculum map
 - Sample curriculum maps
 - Analysis of the curriculum map
 - Gaps in the curriculum
 - Sample input from alumni, in program students exiting students and faculty

PROCESS to identify the extent of compliance of Institute curriculum for attainment of POs and PSO

1. POs and PSOs stated clearly
2. Institute curriculum is stated subject wise and the percentage of total credits for each subject is evaluated
3. The total number of contact hours for each subject in a semester is calculated.
4. The POs and PSOs are mapped with each domain.
5. The compliance is found out by checking whether each domain is maps with the relevant PO and PSO.

Program Outcome

1. A sound working knowledge of the fundamental principles of mathematics, science, and engineering that underpin Mechanical Engineering.
2. Demonstrate the ability to identify, research, and solve complex engineering problems by reinforcing a systematic approach to problem solving.
3. Design, conduct experiments, as well as analyse and interpret data to problems faced by community, with appropriate considerations for public health and safety, culture, society and environmental issues.

4. Develop a spirit of scientific enquiry and be committed to professional, ethical and environmental responsibility as professional engineer while contributing positively to the community.
5. Apply statistical knowledge and tools to monitor the quality of a product/ service being manufactured/ produced in an industry.
6. Have confidence to give intelligent judgment with an appropriate and systematic outcome taking into consideration the impact of engineering solutions in a global, economic, environmental, and societal context.
7. Appreciate the process of decision making by a professional engineer and its impact on society and environment, taking into consideration the principles of sustainable development.
8. Ability to think both creatively as well as analytically with an understanding of professional and ethical responsibility.
9. Function effectively on teams or On group projects, and assume leadership roles when appropriate.
10. Inculcate skills required for technical report writing and improve their professional communication and presentation at corporate level.
11. Effectively plan, organize, schedule, execute, and lead engineering management-related projects using virtual project teams.
12. Lifelong learning with the capacity to learn unlearn and relearn independently and as part of a group through a variety of different methods.

Program Specific Outcomes

PSO	Statement
1	Graduates should be creative, imaginative and proficient mechanical engineers employable to serve in the industry, government and allied services
2	Graduates should be able to advance in academic and research pursuits in mechanical and allied disciplines
3	Graduates should take a lead in innovation and entrepreneurship activities with high standards of professional and moral ethics and prove themselves beneficial to society at large

POs and PSOs Mapped with each domain

Course Component	Total number of contact hours	Total number of credits	POs	PSOs	Justification
Mathematics	12	11	1 2 3 4 & 1 2	1, 2& 3	<p>PO 1: To find the solution for complex Engineering problems.</p> <p>PO 2: Identify complex Engineering problems, formulate corresponding Mathematical equations and analyse them using the principles of Mathematics, and find solutions.</p> <p>PO3: To develop solutions to the complex Engineering problems by giving appropriate considerations to public health, safety, culture, society and environment.</p> <p>PO4: Will be equipped with tools which will help them to design experiments, analyse and interpret data and thereby reach valid conclusion.</p> <p>PO 12: Will be able to engage in life-long learning to keep themselves updated with various tools in Mathematics (new or modified) which forms the basis of new technological development.</p>
Basic Sciences	22	18	1, 2, 3, 4, 1 2	1, 2& 3	<p>PO 1: Will be able to apply the knowledge of Basic Sciences like Physics and Chemistry to find solutions for complex Engineering problems.</p> <p>PO 2: Will be able to identify complex Engineering problems and will be able to analyse them based on the research literature available in various fields of basic sciences.</p> <p>PO3: Will be able to develop solutions to the complex Engineering problems by giving appropriate considerations to public health, safety, culture, society and environment.</p> <p>PO4: Will be equipped with tools which will help them to design experiments, analyse and interpret data and thereby reach valid conclusion.</p> <p>PO 12: Will be able to engage in life-long learning to keep themselves updated with various tools, new or modified, which forms the basis of new technological development.</p>

Basic Engineering courses	23	19	1 2 3 4 & 1 2	1, 2& 3	<p>PO 1: Will be able to apply the knowledge of Basic Engineering courses to find solutions for Engineering problems.</p> <p>PO 2: Will be able to identify complex Engineering problems and will be able to analyse them based on the research literature available in the field of basic Engineering.</p> <p>PO3: Will be able to design solutions for the complex Engineering problems with their knowledge in basic Engineering, giving due considerations to public health, safety, society, culture and environment.</p> <p>PO4: Will be able to use research based knowledge and research methods in the field of basic engineering courses, analyse, synthesise and interpret the information obtained, to provide valid conclusions for real life problems.</p> <p>PO 12: The knowledge in basic engineering courses will prepare students to keep abreast with the technological changes and thus will provide the ability to engage in independent and lifelong learning.</p>
Computing	8	7	1 2 3 4 5 & 1 2	1, 2& 3	<p>PO 1: The knowledge of the students in computing will help them to find solutions to Engineering problems on a real time basis.</p> <p>PO 2: The knowledge in computing will help a student to formulate a complex engineering problem, analyse it and reach valid conclusions.</p> <p>PO3: Will be able to design solutions for complex Engineering problems with their knowledge in computing, giving due considerations to public health, safety, society, culture and environment.</p> <p>PO4: Will be able to develop research methods by making use of the various tools available in computing, analyse, synthesize and interpret the information obtained, to provide valid conclusions for real life problems.</p> <p>PO 5: Will be able to apply modern IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.</p> <p>PO 12: The knowledge in computing will prepare them to keep abreast with the technological changes and thus will provide the ability to engage in independent and lifelong learning.</p>

	8	8	1 2 3 4 5 & 1 2	1, 2& 3	PO 1, PO 2, PO 3, PO 4, PO 5: The knowledge about the interdisciplinary subjects like Mechatronics will help the students to identify complex Engineering problems, formulate corresponding Mathematical equations, and analyse them, develop solutions by giving appropriate considerations to public health, safety, culture, society and environment. PO 12: The students will be able to engage in life-long learning of these subjects and thus apply it in a way which is useful to the society. interdisciplinary subjects.
Humanities	8	8	6 9 1 0 1 1 & 1 2		PO 6, PO 8: Students will be able to apply the Engineering knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice keeping in mind the ethical principles. PO 9, PO 10, PO 11: Students will become competent to work as a team and will be able to communicate effectively and manage the financial aspects. PO 12: Students will be made aware of their responsibility to engage in life-long learning as an individual who has a moral responsibility to contribute to the society.
Professional Core	123	135	1 2 3 4 5 & 1 2	1, 2& 3	PO 1, PO 2, PO 3, PO 4, PO 5: Student will be able to apply the knowledge of the core subjects to identify complex Engineering problems, formulate corresponding Mathematical equations, and analyse them, develop solutions by giving appropriate considerations to public health, safety, culture, society and environment. PO 12: Students will be able to engage in life-long learning to keep themselves updated with various new technologies, new or modified, which forms the basis of new technological development.
Electives	6	6	1 2 3 5 & 1 2	1, 2& 3	PO 1, PO 2, PO 3, PO 4, PO 5: Student will be able to apply the knowledge they gain from choosing the subject in their area of interest to identify complex Engineering problems, formulate corresponding Mathematical equations, and analyse them, develop solutions by giving appropriate considerations to public health, safety, culture, society and environment. PO 12: Students will be able to engage in life-long learning to keep themselves updated with various new technologies, new or modified, which forms the basis of new technological development.

Management	4	4	1 to 1 2	1, 2& 3	<p>PO 1, PO 2, PO 3, PO 4, PO 5: Student will be able to apply the skills and techniques they gain from learning the management subjects to identify complex Engineering problems, formulate corresponding analytical solutions, test them, by giving appropriate considerations to public health, safety, culture, society and environment.</p> <p>PO 6, PO 7, PO 8, PO 9, PO 10, PO 11, PO 12: Students will be aware of their professional responsibilities with commitment to ethics. They will develop good communication and project management skills. They will develop a passion for life-long learning.</p>
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Attainment of program outcomes and Programme specific outcomes

Program outcomes give the goals and directions of the program. The curriculum, pedagogy and assessment supports the attainment of these outcomes to make the program outcome-based. Curriculum mapping is a tool for checking the extent to which this is achieved. The extent to which the program outcome is being addressed in a course can be judging by the course outcome statements. □The curriculum map is presented in Table 3.1.3 where the faculty teaching a particular course will need to associate their course outcomes with the programme outcomes.

Analysis of Curriculum Map to Identify Gaps in the Curriculum

The analysis of the curriculum map above shows that the level of achievement of the POs - 1, 2, 3, 4 and 12 is above 60%, while as the percentage of achievement of the POs -5, 6, 7, 8, 9, 10, 11 is less than 60%. This implies that in order to achieve the attainment level of PO's the corrective actions are needed to improve the attainment levels which are below 60%.

Classifying the Gaps in the Curriculum

The gaps in the curriculum, identified through surveys, fall in three categories:

- **Topic gaps**
- **Depth gaps**
- **Knowledge gaps**
- **Topic gap:**

If a topic is determined to be necessary, but does not exist in the current curriculum, that topic is identified as a topic gap.

Depth gap:

The courses quickly become out of date because technology is rapidly changing and the material missing is related to courses that already exist in the curriculum. If courses in the current curriculum state that a desired topic is addressed, but the knowledge in the area is not appropriate, then the topic is a depth gap. Depth gap exists due to lack of modernization of course content or in depth coverage of important topics.

Knowledge Gap:

If courses in the current curriculum address a desired topic, but students cannot take the courses due to the inflexibility in program constraints, then that topic is identified as a knowledge gap.

- Expert Lectures
- Workshops
- Group Assignments
- Group Discussion
- Demonstration of practical cases
- Quiz, Videos, PPTs
- Seminar, Tutorials
- Mini Projects
- Industry Internships

The attainment levels are calculated for each course to determine whether the objectives (POs, COs and PSOs) are achieved. The Attainment levels for various courses are presented in Table 3.3.2 (a), (b) and (c) of criterion 3. Since the course curriculum and the question papers are designed on the basis of POs, COs and PSOs. Thus the grades obtained by the students are the direct indicators of POs, COs and PSOs.

Course (MEC)	Course Name	Program Outcomes											
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
201	Machine Drawing	4	2	1	1	1	1	1	3	2	2	2	1
302	Mechanics of Material-I	4	3	3	3	1	2	3	4	1	1	1	4
303	Fluid Mechanics	4	4	4	4	2	3	3	4	1	1	1	4
304	Engineering Thermodynamics	4	4	4	4	2	3	3	4	1	1	1	4
403	Theory of Machines-I	5	4	3	3	2	3	2	4	3	3	3	3
401	Materials Science	4	3	3	2	2	3	3	3	2	2	2	3

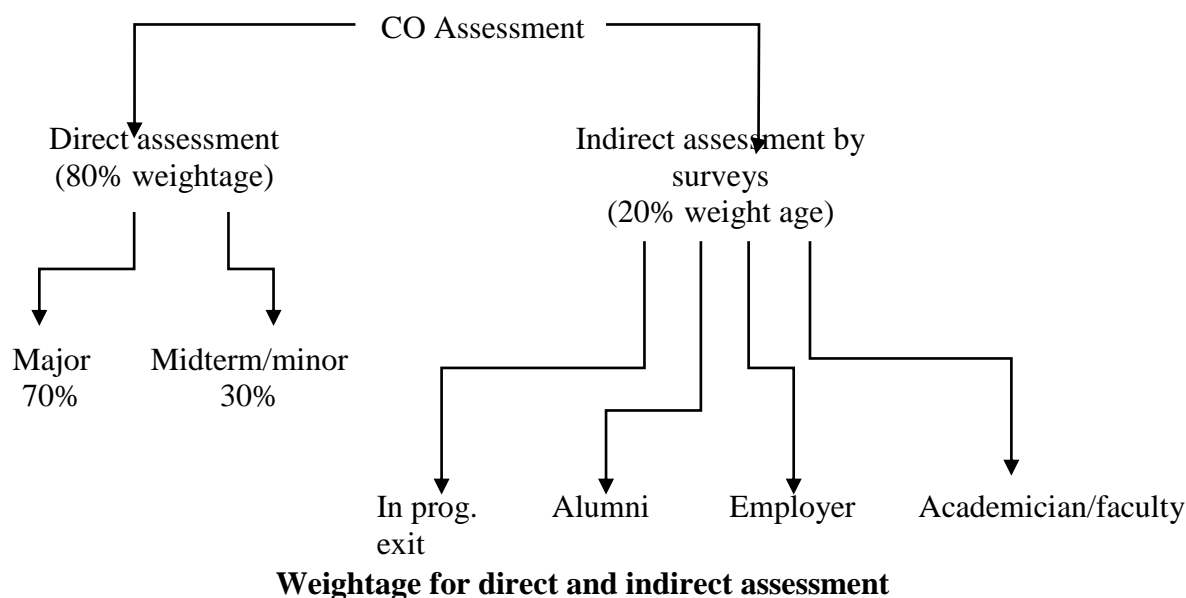
502	Machine Design-I	5	4	3	3	2	3	2	4	3	3	3	3
504	Heat Transfer	5	5	4	4	2	3	3	4	1	1	1	4
505	Industrial Engineering-I	5	5	4	4	4	4	4	4	3	3	5	5
603	Fundamentals of Tribology	5	4	3	3	2	3	2	4	3	3	3	3
604	Linear Optimization in Engineering	4	4	3	3	4	3	5	3	5	4	4	4
606	Seminar	4	3	2	3	3	3	3	3	2	5	3	4
703	Industrial Engineering-II	4	5	4	4	4	4	4	4	3	3	5	5
706	Final Year Project	5	5	3	3	2	3	5	5	5	5	5	4
801	Production and Operation Management	4	5	4	4	4	4	4	3	4	3	5	5
805	Final Year Project	5	5	3	3	2	3	5	5	5	5	5	4
Program outcomes of the different course offered by the Mechanical Engineering Department													

COURSE CODE	PSO CO	PS01	PS02	PS03
MEC 201.1	Machine Drawing	3	2	2
MEC 201.2	Machine Drawing	3	2	2
MEC 201.3	Machine Drawing	3	2	2
MEC 201.4	Machine Drawing	3	2	2
MEC 302.1	Mechanics of Material-I	3	2	2
MEC 302.2	Mechanics of Material-I	3	2	3
MEC 302.3	Mechanics of Material	2	2	2
MEC 303.1	Fluid Mechanics	3	3	2
MEC 303.2	Fluid Mechanics	3	3	2
MEC 303.3	Fluid Mechanics	3	3	2
MEC 304.1	Engineering Thermodynamics	3	3	2
MEC 304.2	Engineering Thermodynamics	3	3	3
MEC 304.3	Engineering Thermodynamics	3	3	3
MEC 403.1	Theory of Machines-I	3	3	2

MEC 403.2	Theory of Machines-I	3	3	2	
MEC 403.3	Theory of Machines-I	3	3	2	
MEC 401.1	Materials Science	3	3	2	
MEC 401.2	Materials Science	3	3	2	
MEC 401.3	Materials Science	3	3	2	
MEC 502.1	Machine Design-I	3	3	2	
MEC 502.2	Machine Design-I	3	3	2	
MEC 502.3	Machine Design-I	3	3	2	
MEC 502.4	Machine Design-I	3	3	2	
MEC 504.1	Heat Transfer	3	3	2	
MEC 504.2	Heat Transfer	3	3	2	
MEC 504.3	Heat Transfer	3	3	2	
MEC 505.1	Industrial Engineering-I	3	3	3	
MEC 505.2	Industrial Engineering-I	3	3	2	
MEC 505.3	Industrial Engineering-I	3	3	3	
MEC 603.1	Fundamentals of Tribology	3	3	2	
MEC 603.2	Fundamentals of Tribology	3	3	2	
MEC 603.3	Fundamentals of Tribology	3	3	2	
MEC 604.1	Linear Optimization in Engineering	3	3	2	
MEC 604.2	Linear Optimization in Engineering	3	3	3	
MEC 604.3	Linear Optimization in Engineering	3	3	3	
MEC 604.4	Linear Optimization in Engineering	3	3	3	
MEC 606.1	Seminar	3	3	2	
MEC 606.2	Seminar	3	3	2	
MEC 606.3	Seminar	3	3	2	
Mapping of COs with PSOs of different courses					
COURSE CODE	CO	PSO	PSO1	PSO2	PSO3
MEC 703.1	Industrial Engineering-II		3	3	2

MEC 703.2	Industrial Engineering-II	3	2	2
MEC 703.3	Industrial Engineering-II	3	2	3
MEC 706.1	Final Year Project	3	2	2
MEC 706.2	Final Year Project	3	2	2
MEC 706.3	Final Year Project	3	3	3
MEC-801.1	Production and Operation Management	3	3	3
MEC-801.2	Production and Operation Management	3	3	2
MEC-801.3	Production and Operation Management	3	3	2
MEC 805.1	Final Year Project	3	2	2
MEC 805.2	Final Year Project	3	2	2
MEC 805.3	Final Year Project	3	3	3
Mapping of COs with PSOs of different courses				

Attainment levels of COs



2.2 Teaching -Learning Process (70)

2.2.1 Process followed to improve quality of Teaching Learning (15)

A. Adherence to academic calendar

Academic Calendar for the year 2017-2018(Spring session)

ACTIVITY	Date	
	From	To
REGISTRATION		
B.Tech. 8th semester	19-02-2018	21-02-2018
Registration with late fee @ Rs. 400/= per day	Up to 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 to 28-02-2018	
Registration with late fee @ Rs. 400/= per day	Up to 05-03-2018	
COMMENCEMENT OF CLASSES		
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 and Ph.D.	01-03-2018	
Extra-Curricular Activities	28-04-2018 to 30-04-2018	
Alumni meet-2018	28-04-2018 to 29-04-2018	
B.Tech.. 8 th Semester	16-04-2018 to 21-04-2018	
B.Tech.. 2 nd , 4 th & 6 th ; M.Tech./M.Sc. 2 nd & 4 th semesters and Ph.D..	23-04-2018 to 28-04-2018	
ANNUAL DAY	01-05-2018	
PRACTICAL EXAMINATIONS		
B.Tech.. Project viva-voce Exam	11-06-2018 to 12-06-2018	
M.Tech. Dissertation Viva-voce Exam	1 st week of July-2018	
END SEMESTER		
B.Tech.. 8 th	28-05-2018	
B.Tech.. 2 nd , 4 th & 6 th ; M.Tech. / M.Sc. 2 nd & 4 th semesters and Ph.D.	19-06-2018	
Advertisement for Ph.D. admissions	Last week of May-2018	
Supplementary Examinations for odd semester	From 02-07-2018	
Summer Break	10-07-2018	22-07-2018
Special Supplementary Examinations for 8th semester	16-07-2018	

Academic Calendar for the year 2017-2018 (Autumn session)

Registration for U.G., P.G. & Ph.D..	23-07-2018 to 25-07-2018
Registration with late fee @Rs 400/= per day	Up to 30-07-2018
Commencement of classes	26-07-2018
Extracurricular activity	07-09-2018 to 15-09-2018
Midterm examination	10-09-2018 to 15-09-2018
Convocation	22-09-2018
Alumni meet Delhi chapter	29-09-2018 to 30-09-2018
Tech fest/ECA	13-10-2018 to 15-10-2018
National innovation day	15-10-2018
Practical examination	1st week of November
National Entrepreneur day	09-11-2018
End semester examination	From 12-11-2018
Supplementary examinations for even semester	From 26-11-2018
Winter vacation for students	10-12-2018

Adherence to Academic Calendar Year 2017-2018

Month	Date	Activities Planned
February	19-02-2018 to 21-02-2018	Registration B.Tech.. 8 th Semester (Spring 2018 session)
	22-02-2018	Commencement of classes for B.Tech.. 8 th Semester
	22-02-2018 to 26-02-2018	Registration with late fee B.Tech.. 8 th Semester (Spring 2018 session)
	26-02-2018 to 28-02-2018	Registration B.Tech.. 2 nd , 4 th and 6 th Semesters, M.Tech./M.Sc. 2 nd and 4 th and Ph.D. (Spring 2018 session)
March	01-03-2018 to 05-03-2018	Registration with late fee B.Tech.. 2 nd , 4 th and 6 th Semesters, M.Tech./M.Sc. 2 nd and 4 th and Ph.D. (Spring 2018 session)

	01-03-2018	Commencement of classes for B.Tech.. 2 nd , 4 th and 6 th Semesters, M.Tech./M.Sc. 2 nd and 4 th and Ph.D..
April	16-04-2018 to 21-04-2018	Mid-Term exam B.Tech.. 8 th Semester
	23-04-2018 to 28-04-2018	Mid-Term exam B.Tech.. 2 nd , 4 th and 6 th Semesters, M.Tech./M.Sc. 2 nd and 4 th and Ph.D..
	28-04-2018 to 29-04-2018	Alumni Meet-2018
	28-04-2018 to 30-04-2018	Extra-Curricular Activities
May to Dec	01-05-2018	Annual Day
	Activities planned for months to come	

Adherence to Academic Calendar (2016-2017)

Month	Date	Activities Planned
February	25-02-2016 to 29-02-2016	Registration (Spring 2017 session)
March	01-03-2016 to 04-03-2016	Late Registration (Spring 2017 session)
	01-03-2016 to 10-06-2016	Teaching (8 th Semester)
	01-03-2016 to 17-06-2016	Teaching (other Semesters)
April	11-04-2016 to 14-04-2016	1 st Minor
	15-04-2016 to 17-04-2016	Extra-Curricular Activities
May	16-05-2016 to 19-05-2016	2 nd Minor
	21-05-2016 to 22-05-2016	Alumni Day
	28-05-2016	Annual Day
June	09-06-2016 to 11-06-2016	B.Tech.. Project Viva-voce Examination
	13-06-2016 to 23-06-2016	Major (8 th Semester)
	24-06-2016 to 08-07-2016	Major (Other even Semesters)
	27-06-2016	Result Declaration (8 th Semester)
	30-06-2016	M.Tech. Dissertation Viva-voce Exam
	04-07-2016	Result Declaration (M.Tech.)
	11-07-2016 to 19-07-2016	Supplementary Examinations for odd semester

July	15-07-2016	Result Declaration (all semesters)
	20-07-2016 to 21-07-2016	Registration (Autumn 2017 session)
	22-07-2016 to 25-07-2016	Late Registration (Autumn 2017 session)
	22-07-2016 to 10-11-2016	Teaching
	29-07-2016 to 31-07-2016	Tech. Fest
August	3 rd week of August	Fresher's Orientation Day
	29-08-2016 to 01-09-2016	1 st Minor
September	02-09-2016 to 04-09-2016	Extra-Curricular Activities
	Last week of September/ First week of October	Convocation 2016 (Not Held)
October	3-10-2016 to 06-10-2016	2 nd Minor
November	14-11-2016 to 28-11-2016	Major for odd semesters
December	01-12-2016 to 12-12-2016	Supplementary Examination for Even Semester
	12-12-2016	Result Declaration (all semesters)
	13-12-2016 to 24-02-2017	Winter Vacations for students

Institute Academic Calendar for the Year 2015-16

ACADEMIC CALENDAR OF NIT SRINAGAR FOR THE YEAR 2015-16				
SPRING SESSION				
ACTIVITY	DATE		DAY	
	From	To	From	To
1. a. Registration	02-03-2015	04-03-2015	Monday	Wednesday
b. Late Registration	05-03-2015	09-03-2015	Thursday	Monday
2. a. Teaching (8th Semester)	05-03-2015	12-06-2015	Thursday	Friday
b. Teaching for other semesters	05-03-2015	19-06-2015	Thursday	Friday
3. 1st Minor	13-04-2015	16-04-2015	Monday	Thursday
4. Extra-Curricular Activities	17-04-2015	19-04-2015	Friday	Sunday
5. 2nd Minor	18-05-2015	21-05-2015	Monday	Thursday
6. Tech. Fest.	22-05-2015	24-05-2015	Friday	Sunday
7. Alumni Day	24-05-2015		Sunday	
8. Annual Day	30-05-2015		Saturday	
9. B.Tech.. & M. Tech. Project Viva	11-06-2015	13-06-2015	Thursday	Saturday
10. Major for 8th semester	15-06-2015	23-06-2015	Monday	Tuesday
11. Major for other even semesters	24-06-2015	06-07-2015	Wednesday	Monday

12. Supplementary for odd semesters	09-07-2015	17-07-2015	Thursday	Friday
13. Result Declaration for 8th Semester	26-06-2015		Friday	
AUTUMN SESSION				
ACTIVITY	DATE		DAY	
	From	To	From	To
1. a. Registration	20-07-2015	23-07-2015	Monday	Thursday
b. Late Registration	24-07-2015	27-07-2015	Friday	Monday
2. Teaching	24-07-2015	10-11-2015	Friday	Tuesday
3. Fresher Orientation Day	3rd week of August			
4. 1st Minor	31-08-2015	03-09-2015	Monday	Thursday
5. Extra-Curricular Activities	18-09-2015	20-09-2015	Friday	Sunday
6. CONVOCATION 2015	Third Week of September			
7. 2nd Minor	05-10-2015	08-10-2015	Monday	Thursday
8. Major for odd semesters	16-11-2015	30-11-2015	Monday	Tuesday
9. Supplementary for even semesters	03-12-2015	10-12-2015	Thursday	Thursday
10. WINTER VACATIONS (for students)	11-12-2015	29-02-2016	Friday	Monday

Adherence to Academic Calendar (2015-2016)

ADEHERENCE TO THE ACADEMIC CALENDAR OF NIT SRINAGAR FOR THE YEAR 2015-16				
SPRING SESSION				
ACTIVITY	DATE		DAY	
	From	To	From	To
1. a. Registration	02-03-2015	04-03-2015	Monday	Wednesday
b. Late Registration	05-03-2015	09-03-2015	Thursday	Monday
2. a. Teaching (8th Semester)	05-03-2015	12-06-2015	Thursday	Friday
b. Teaching for other semesters	05-03-2015	19-06-2015	Thursday	Friday
3. 1st Minor	13-04-2015	16-04-2015	Monday	Thursday
4. Extra-Curricular Activities	17-04-2015	19-04-2015	Friday	Sunday
5. 2nd Minor	18-05-2015	21-05-2015	Monday	Thursday
6. Tech. Fest.	22-05-2015	24-05-2015	Friday	Sunday

7. Alumni Day	24-05-2015		Sunday	
8. Annual Day	30-05-2015		Saturday	
9. B.Tech.. & M. Tech. Project Viva	11-06-2015	13-06-2015	Thursday	Saturday
10. Major for 8th semester	15-06-2015	23-06-2015	Monday	Tuesday
11. Major for other even semesters	24-06-2015	06-07-2015	Wednesday	Monday
12. Supplementary for odd semesters	09-07-2015	17-07-2015	Thursday	Friday
13. Result Declaration for 8th Semester	26-06-2015		Friday	
AUTUMN SESSION				
ACTIVITY	DATE		DAY	
	From	To	From	To
1. a. Registration	20-07-2015	23-07-2015	Monday	Thursday
b. Late Registration	24-07-2015	27-07-2015	Friday	Monday
2. Teaching	24-07-2015	10-11-2015	Friday	Tuesday
3. Fresher Orientation Day	3rd week of August			
4. 1st Minor	31-08-2015	03-09-2015	Monday	Thursday

B. Pedagogical initiatives

Real time examples

- To demonstrate the complexity and unpredictability of real issues, and to stimulate critical thinking real world examples are discussed.
- Inter- and multi-disciplinary approaches are used for problem solving.
- In order to demonstrate that there is no perfect solution to a particular problem real world problems are invoked.
- Real world examples help students think more analytically about the solutions.

Interactive classrooms

Classes are made more interactive by encouraging student participation as follows:

- Asking students to elaborate something they have written in a response paper or on the class' discussion board.

- Having students to answer other students' questions.
- Punctuating the lecture with questions.
- Interrupting the lecture with a sample exam question.
- Asking students to interpret a statistic, a graph, a chart, or another visual image.
- Integrating a case study or an inquiry or a problem solving exercise into the class.
- Integrating student presentations into the class.
- Asking questions that involve higher-order thinking skills like diagnostic, challenge, evaluation or prediction questions.
- Asking students to summarize the main points that they learned in class that day and the points they found most confusing.
- Asking the students to explain the relevance, utility, or significance of the information presented in the class.

Slide Presentation

Slide presentation is used to benefit the students by engaging in multiple learning styles, increasing visual impact, improving audience focus and providing annotations and highlights.

Video Lectures

Video lectures are imparted that are archived and can be accessed anytime anywhere. For certain topics and concepts video can be used by the novice students who have lower knowledge to process the concepts. Almost 50% of the lecture halls are fitted with LCD projectors to facilitate this initiative.

Collaborative learning

Theory subjects and Lab

- Groups comprising a maximum of five to six students are formed in each class.
- One from the group is designated as the group leader.
- Each group may be assigned tasks by the faculty and a report on the activity is provided by the respective group leader.
- An assessment on the report is done by the faculty to analyse the expected outcome from the activity is achieved.
- The tasks assigned could be a minimum of three in each semester as decided by the faculty member.

- The focus of the tasks is on learning new technologies, enhance the knowledge on a particular topic, studying new tools to be in pace with the industry, doing some mini projects, etc.
- Additional experiments could be assigned to each group in lab sessions.
- Faculty encourages each group to disseminate the knowledge they have gathered to others.

Group Discussion

Group Discussions is an excellent strategy for enhancing student motivation, fostering, intellectual agility and encouraging democratic habits. It creates opportunities for students to practice and to sharpen a number of skills including the ability to articulate and defend positions, consider different points of view, and enlist and evaluate evidence. The group discussions are promoted in the theory and lab classes.

Assignments

The purpose of the writing assignments is to help each student develop research and communication skills so they obtain the necessary information literacy skills to complete the engineering curriculum.

Writing assignments is a flexible means of demonstrating learning as well as a method of exploring one's thinking to stimulate learning. The mechanical engineering department strictly follows this method

- A minimum of two assignments is given for each course in a semester.
- The assignment given could be theoretical or a practical implementation.
- The assignments are designed so that the COs, POs and PSOs are covered in the questions asked in the assignments.

Conducting Quiz

- Quizzes are conducted for all courses in all semesters.
- At least one quiz competition is held per course in semester.
- Faculty keeps a document of the quiz questions.
- The mode of conducting quiz is oral the class.
- Quiz Competitions are organized to promote scholastic excellence and to provide a venue for interaction amongst students.

Tutorials

Tutorials are generally intended to

- Enables the students to pursue their individual academic interests within the context of the subject.
- Helps the students to gain a deep understanding of the subject matter.
- Develop students' ability to think and act like a professional in their discipline.
- Develop students' basic academic skills like identification and evaluation of relevant resources, effective communication, effective time-management etc.
- For each subject, at least one hour in every week is allotted for conducting tutorial as shown under the heading "Structure of Curriculum" above.
- A tutorial register is maintained for each subject and regularly maintained by the concerned faculty.

Self-Learning Facility

The self-learning facilities provided in the institute are:

- A Common Computing Centre equipped with more than 100 computers is available 12 hours per day with internet facility.
- A computer lab equipped with 30 computers having necessary system and application software's is functioning 12 hours per day for students to carry out their work.
- A Wi-Fi facility of 10Mbps speed is available which can be accessed anywhere in the campus.
- A Central Library with an excellent collection of Books, Journals, Technical magazines, Newspapers and non-book materials in engineering and technology, science, humanities and management like CD-ROM's are available.
- The digital library provides IP enabled access to a large number of full texts on line journal databases from the various publishers such as Science direct etc.

Lectures/ Seminars

- Every year a number of eminent personalities are invited from a variety of fields, articulating their thoughts and elaborating on their well-known works, ranging from current rages to the age old topics.

Internal Assessment Tests

- Two internal assessment tests are conducted in every semester.
- The first test is conducted after the completion of the first module of each subject.
- The duration of each test is one hour.
- The results of each tests are analysed to identify the weak and bright students.
- The bright students are assigned some task by the faculty to encourage their performance.

- Remedial classes and tests are conducted for the weaker students after each test and the remedial test results are analysed to identify the impact.

Industrial Training and Industrial Visits

The objectives of the industrial training are to expose the students to the engineering practice which is specific to their course specialization and to the nature of the industry selected to expose the students to the responsibility of an engineer and the engineering profession to develop the students' communication skills that include daily interaction within the working environment and technical writing.

- The students of the mechanical engineering department are deputed to renowned industries for undergoing industrial training of minimum 6 weeks, at 5th and 6th semester levels.
- The same is evaluated at the end of 7th semester.
- In addition, the students have several industrial visits depending upon faculty members.

Exhibitions

- Project exhibitions are encouraged during programs of technical festivals such as TECHVAGANZA etc. organized by NIT Srinagar.
- Students are encouraged to take part in exhibitions conducted by various organizations so that their innovative ideas are made known to the public.

C. Methodologies to support weak students and encouraging bright students:

- The students scored above 80% marks belong to the group of bright students.
- The measures taken to encourage bright students will be decided by the respective faculty.
- The measures taken include the following and additional actions may be added according to the requirement:
 - Recommend some quality references.
 - Provide details of books to be referred.
 - Suggest e-resources and journals.
 - Introduce a new tool/ software.
 - Bright students are asked to help weak students to boost their morale.
 - Prepare quiz on topics from the subject.

Assistance to weak students

Theory Subjects

- A total of two tests are conducted in each semester to assess the student's performance in theory subjects.
- After each test, the faculty analyses the results and categorize the students into two groups.
- The students who scored less than 50% marks belong to group of weak students and above 80% belong to the group of bright students.
- Remedial classes are conducted for the weak students by each faculty.
- The number of hours taken for remedial classes are decided by the faculty as required.
- A remedial test is conducted for the weaker students thereafter and the results are analysed to identify the impact of the remedial classes.
- Additional measures are taken by the respective faculty in cases where the students fail to achieve the objective of remedial classes.

Process to identify weak students in Lab

- On the basis of the marks awarded for daily class work, weak students are identified during the conduct of lab work.
- A remedial class is given to the weak students in which they are made to do the experiments again and calculations are explained to them.
- Their performance is evaluated again on the basis of marks awarded for lab record.
- The same procedure is repeated at end of second half of the experiments.
- Additional measures are taken by the respective faculty in cases where the students fail to achieve the objective of remedial lab classes.
- The final exam is conducted at the end of the semester and the same is repeated.

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

In order to facilitate the better classroom teaching the faculty members arrange the students in a classroom in such a way that the weaker students are constantly being monitored by the faculty member. It is always ensured that a weaker student is seated with a bright student. The classification of weaker and bright students is based on the grades in the previous semesters and mutual consultation of the faculty members. There is constant interaction between the students and the faculty in a class. The faculty members encourage the students to interrupt the teacher during the lecture for asking questions. The relevance and the depth of the question helps the faculty to assess the quality of the students and also the interest of the students in acquiring the knowledge. It consists of

- Faculty member interrupts during the lecture and asks questions regarding the topics which the faculty was discussing previously in the classroom. This ensures that the students remain attentive during the delivery of the lecture.
- The weaker students are frequently asked to repeat what the faculty is teaching in that particular class so that the students constantly maintain the rough notebook in the classroom.
- The faculty member would make at least two rounds in the classroom so that the lectures are recorded by the students in the classroom.
- Numerical problems in the classroom are assigned to the students, group wise. Each group is monitored so that a healthy atmosphere of discussion among the students is initiated to solve the problems.

E.F. Conduct of experiments and continuous assessment in the laboratory

(5)

- A lab manual is maintained in each laboratory.
- Each laboratory includes three types of experiments:
 - Experiments in the prescribed syllabus.
 - Experiments that cover advanced topics.
 - Open-ended Experiments.
- All the experiments in the prescribed syllabus are compulsorily followed and completed by the end of the semester.
- Students should complete at least two or three experiments that cover the advanced topics in each laboratory.
- Open-ended Experiments could be assigned by the faculty or the students may choose an experiment on their own to be completed in the laboratory.
- The objective and the procedure for all experiments in the prescribed syllabus and is available in the lab manual.
- The solution along with the objective and the procedure are added to the lab manual for the experiments that cover advanced topics.
- Groups comprising a maximum of five to six students are formed in each class.
- One from the group is designated as the group leader.
- Each group may be assigned tasks by the faculty and a report on the activity is provided by the respective group leader.

- Every student maintains a rough record to record the details of work done in each laboratory session.
- The students are directed to write the step by step procedure to achieve a solution for the given experiment.
- The faculty-in-charge checks the procedure and then students can proceed with doing the experiment.
- In order to facilitate the continuous monitoring of the experiments performed by the student, PhD scholars are always associated with the concerned faculty member.
- Each group of the students is supervised by a PhD scholar. The PhD scholars initially assess the students in the which is finalized with the consultation of the faculty member.
- Student should record the observations in the rough record while doing the experiment.
- Students may also analyse the data to plot graph or other related work.
- The final output is verified by the faculty-in-charge.
- Students should add the details of the experiments done in the laboratory to the prescribed record book.
- Students can appear for the Practical Examination only if the record is certified by the faculty-in-charge.

G. Students feedback of teaching learning process and action taken (2)

Student's feedback

- It is a valuable for identifying areas for instructional improvement.
- The feedback is taken at the end of each semester.
- The HOD provides the suggestions for improvement based on the feedback of the students wherever needed.
- The format of the students' feedback is given below

COURSE APPRAISAL/FEEDBACK FORM

COURSE NO & TITLE

DATE

INSTRUCTOR'

NAME

SEM:

PLEASE TICK IN THE APPROPRIATE BOX

Sr.no.	Course organisation	Range	5	4	3	2	1	
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1	Were the objectives an course plan clearly specified?	Very clearly excellent							Very poorly
2	Was the course coverage and depth adequate?	Excellent							Very poor
3	Did the topics provide any new knowledge?	Mostly							Hardly
4	Was the prescribed study material readily available?	Very readily							Not available at all
	Presentation and interaction								
5	How were the lectures in terms of clarity and presentation of the fundamental concepts?	Excellent							Poor
6	Rate the audibility and articulation of the instructors oral presentation	Excellent							Poor
7	Did the instructor encourage think logically and objectively?	Very much							Never
8	Was the instructor's response to the questions asked in the class satisfactory?	Very much							Not at all
9	Rate the instructor's attitude towards teaching of this course.	Enthusiastic							Indifferent
10	Were the classes held regularly and on time?	always							Never
11	Rate the overall quality of teaching in this course	Outstanding							poor
	Evaluation								
12	Did the examinations reflect the courses plan?	Very closely							Poorly
13	Were the examinations of appropriate level and length?	Always							Rarely
14	Were the answer script promptly checked and returned ?	Always							Rarely
15	Was the grading fair and transparent?	Mostly							Rarely
16	Did the midterm evaluation (minor I &II) and feedback improve the understanding of this course?	Always							Rarely

Would you rate this course as one of the five best courses you have had so far? Yes/ no

If you have any further comments not covered by this questionnaire, please write below

Feedback analysis

The feedback forms are collected and are submitted to the HOD for perusal. Depending upon the feedback, the HOD communicates the feedback to the respective faculty member to know their strengths and deficiencies to enhance their teaching skills. The HOD gives necessary

suggestions, guidance and advice for the areas where improvement is needed. The feedback remains strictly confidential between the HOD and the concerned faculty member so that the morale of the faculty does not get affected.

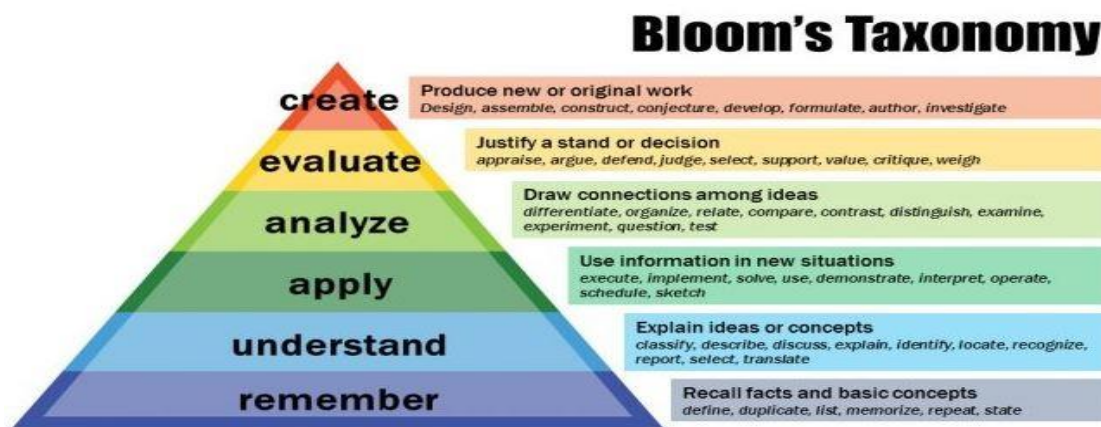
2.2.2 Quality of end semester examination, internal semester question papers, assignments and evaluation (15)

- To ensure the quality of the internal semester question papers the following process is adopted
- Regular midterm exams are held in strict adherence to the academic calendar of the institute.
- The question papers are set in such a way that the COs map with the questions asked.
- The question papers are examined and verified by the HOD to ensure the standard of the question paper and ensures that the COs of the course are covered. The questions papers are modified if HOD is not satisfied with standard requirements of the question paper.
- The questions asked are well balanced to ensure that all the components such as knowledge, comprehension, application, analysis etc. are encompassed.
- To ensure the quality of evaluation, following procedure is in place in the department
- The scheme of evaluation and solution to the problems in the question papers are prepared by the respective faculty in advance.
- The CO coverage and the marks allotted are recorded by the faculty.
- The evaluated answer books are returned to the students by the faculty after evaluation, both in midterm and major exam. It is the statutory requirement of the institute to show the evaluated answer books to the students. Students feedback is received by the faculty regarding the evaluation of each question.
- The students are encouraged to discuss any doubt or discrepancy regarding the evaluation.
- The marks of the students are forwarded to the controller of examinations only after the students are satisfied with evaluation.
- The students are required to append "Seen" or "satisfied" on the evaluated answer books so that no student is left without seeing his evaluated answer books.

B. Process to ensure questions from outcomes/learning level perspective.

- For each subject, a tentative question list is prepared according to the COs.
- While setting the question paper, previous institute exam papers of at least three years are taken into consideration to avoid repetition of questions.

While setting a question papers an attempt is made to follow Bloom's taxonomy. The questions are prepared according to the level of toughness (viz., analyzing the problems, implementation of modern tools, formulating the problems etc.).



The questions asked are of three categories:

- Approximately one third of the questions are of elementary level and can be answered by an average student, which require fundamentals of the course.
- Approximate one third of the questions need analysis and use of content covered as per syllabus.

Remaining one third of the questions are based on advanced level. The solution of these questions/problems require certain amount of critical thinking, analysis and knowledge.

C. 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.
- A record of all class tests / mid-term tests / end semester test is maintained and submitted to the HOD for his perusal to ensure that all the topics are covered in these exams.
- HOD/faculty members ensure that the questions asked previously (midterm) are not repeated so that major portions of COs are covered.
- All the faculty members are compulsorily required to maintain a question paper file

(soft and hard copy) where all the question papers are saved so that question paper for end term is set without repeating of any question from midterm. This scheme helps to prevent repetition of questions and coverage of maximum COs.

D. Quality of assignments and its relevance to COs

➤ Assignment issue and submission dates are announced by the respective faculty members.

➤ A minimum of two assignments are given for each subject.

To ensure the quality of the assignments following procedure is adopted

➤ The assignments are designed to map the COs of the course.

➤ The assignments are designed to cover both theoretical and numerical portion of the course.

➤ The questions given are categorized to knowledge, comprehension, application, analysis, evaluation and synthesis levels.

➤ To ensure maximum exposure in the subject it is a departmental practice that a minimum of 5 different questions are asked for each assignment.

➤ Faculty can choose the type of assignment to be given (questions/ open book test/ seminars or presentations)

➤ In the evaluation of assignment, the required feedback corresponding to each answer is given by the faculty, so that the student can understand the mistake.

➤ Two assignments (best and average) are filed in the course file.

➤ The faculty after submission of every assignment explains the solution of the questions in the class which enable the students to perform well in the final examination.

➤ For any genuine reason, if a student is unable to perform well in the given internal assessment tests or assignment, improvement test is given to him/her.

➤ If a student remains absent for all the tests conducted, they are marked as “Absent” in the result.

➤ Assignments are used as a tool for practice and evaluation is based purely on internal assessment.

- The marks scored by each student are recorded separately for each Course Outcome.
- The CO attainment level is calculated after each test and assignment.
- The CO attainment falls in three levels.

1. If 70% of the total number of students scores above 50% marks for a CO then the attainment level is 3.
2. If 60% of students score above 50% marks then attainment level is 2 and if 50% of students score above 50% then the attainment level is 1.

2.2.3 Quality of the students projects

(20)

Process for identification of students projects

The projects are divided into 4 major groups depending availability of the specialization of the faculty:

- Design Engineering
- Thermal Engineering
- Production Engineering
- Industrial Engineering
- Software based

Identification of project and allocation methodology to faculty members

(2)

- The student's project activity starts at the commencement of the 7th semester.
- Students are divided into groups of 3-6 students.
- The students choose their supervisor and topic as per their field of interest so that the students explore and utilize their talent fully.
- There is no compulsion at the departmental level regarding the choice of supervisor or topic. Thus students frame the groups having the similar field of interest.
- The project proposals are submitted to the prospective supervisors through departmental project coordinator for their perusal. Depending upon the feasibility of the proposal it is further submitted to the HOD for its evaluation by project evaluation committee.

- A project evaluation committee comprising of the HOD, project coordinator and two senior faculty members assess the project proposal on the basis of the significance of the project, objectives, methodology, POs, PSOs and COs.
- Depending upon the recommendation of the committee the students proceed with the project topic and start the work immediately else the students are directed to modify the proposal or change the topic within one week's time.

➤ The project proposal is evaluated as per the following scheme

Criteria	Marks
Topic Relevance	10
Fulfilment of POs, PSOs & Cos	10
Contents	10
Presentation	20
Knowledge	20
Response to questions	30
Total	100
Project Evaluation Committee Criteria Marks Awarded	

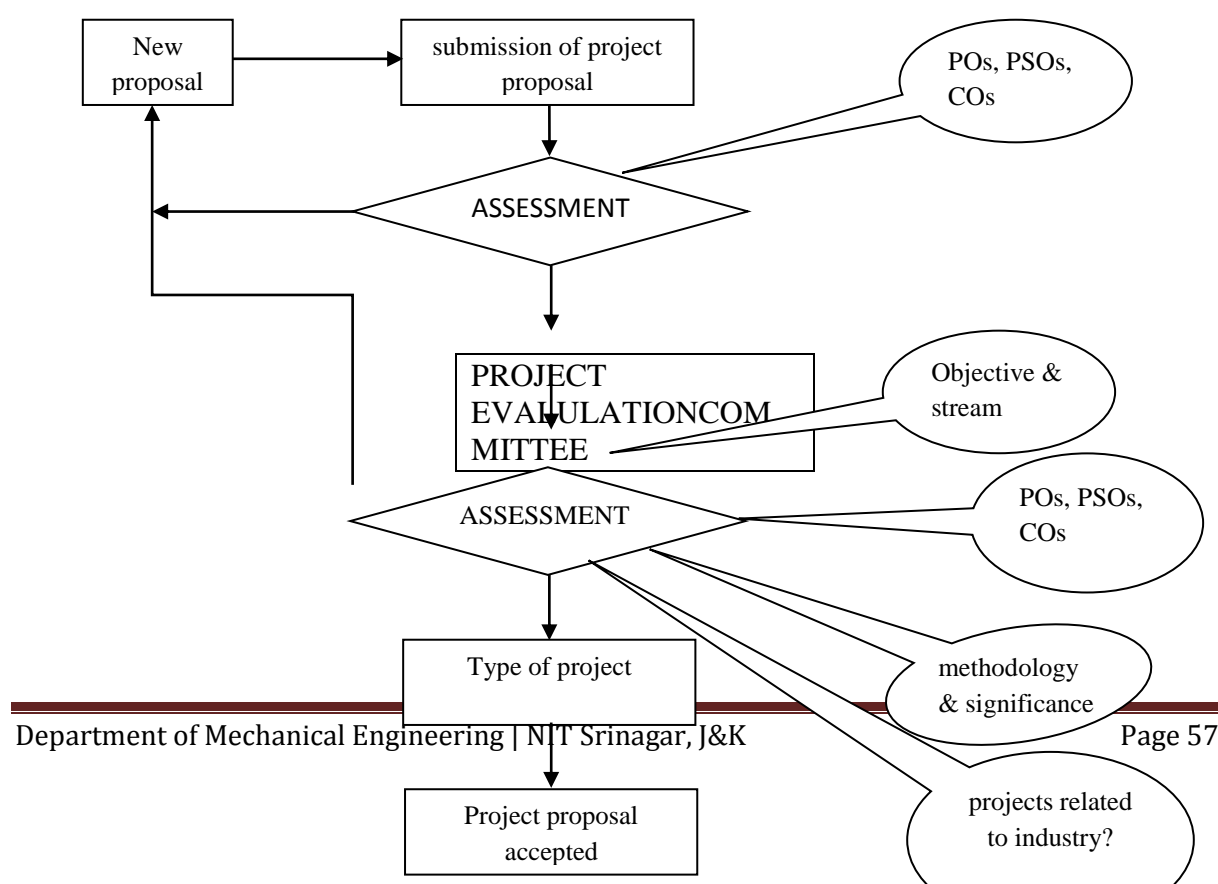


Fig. Flow diagram showing identification of project

Process for continuous monitoring of student projects

- Students are directed to maintain a project diary to record the activities on day to day basis regarding the project work. The recorded included the details of their interactions with the project supervisor.

Process to ensure the quality of student projects

- The Project evaluation committee and the project guide together will analyse 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 projects are classified into different areas and their relevance to PO's and PSO's are identified to ensure its quality.

B. Type and relevance of the projects and their contribution towards of POs and PSOs (2)

Project areas	Mapping with POs	Mapping with PSOs
Design	1-12	1, 2 & 3
Thermal	1-12	1, 2 & 3
Production	1-12	1, 2 & 3
Industrial	1-12	1, 2 & 3
Software	1-12	1, 2 & 3
Relevance to the POs and PSOs		

Year 2018

Sr. no.	TOPIC TITLE	No. of students	SUPERVISOR
1	Study of the variation of blood pressure with accumulation of plaque inside coronary artery	5	Prof. Adnan Qayoom
2	A Strategy for reducing the waiting time of airline passengers using queuing theory.	5	Mr. Saad Parvez
3	Design and fabrication of portable apple grinding machine	5	Mr. M. Mursaleen
4	Public Transit Planning.	4	Mr. Saad Parvez
5	Design and fabrication of modified toothbrush.	4	Mr. G.M. Sheikh.
6	Fabrication and working of electro spinning machine for the production of nano-fibres.	4	Mr. G.M. Sheikh
7	Design and fabrication of coconut water extraction machine	6	Mr. G.M. Sheikh
8	Measurement of aerodynamic force in wind tunnel.	5	Mr. G.M. Sheikh
9	Fabrication of pneumatic gear shifting mechanism.	5	Prof. Adnan Qayoom
10	Semi-Autonomous tele-operated urban search and rescue(USAR) robot.	5	Mr. Shahid Saleem
11	Design and fabrication of sand sieving machine	5	Prof. G.A. Harmain

YEAR 2016			
S.NO.	TOPIC TITLE	NO.OF STUDENTS	SUPERVISOR
1	Design, fabrication and control of an anthropomorphic robotic hand.	5	Prof. Babar Ahmad
2	Motorized screw jack	5	Prof. I.K.Pandita
3	Solid waste management.	6	Prof. M.F.Wani
4	Electric car prototype.	4	Prof. G.A.Harmain.
5	Up-gradation of existing electro-spinning machine and production of nano fibres.	6	Mr. G.M. Sheikh
6	Solar concentration dish for water distillation.	6	Dr. M.S.Charoo.
7	Vibration measurement and control of a smart cantilever beam.	4	Prof. Babar Ahmad
8	Kinetic energy recovery system.	6	Dr. Mohammad. Hanief.
9	Solar powered smart system for rural areas.	3	Prof. Adnan Qayoom
10	Ergonomics design and fabrication	5	Mr. Saad Parvez

	of motor driven wheel chair.		
11	Automatic MOP machine.	5	Mr. Shahid Saleem.
12	Compressed air car	5	Prof. M.F.Wani
Year 2017			
Sr.no.	TOPIC TITLE	No of students	SUPERVISOR
1	Design, fabrication and control of 2-DOF rotary inverted pendulum.	1	Prof. Babar Ahmad
2	Engineering analysis of mechanical and industrial aspects of a milk-plant.	2	Mr. Saad Parvez
3	Design and development of one degree of freedom haptic interface and its applications	2	Prof. Babar Ahmad
4	Autonomous chess playing robot	3	Prof. Babar Ahmad
5	Condition monitoring of worm gear box oil analysis technique.	1	Prof.M.F.Wani.
6	Three axis traverse mechanism for flow system.	5	Prof. Adnan Qayoom
7	Design and fabrication of wearable haptic device.	4	Prof. Babar Ahmad
8	Pump as turbine system.	4	Prof. Adnan Qayoom
9	Smart bicycle.	5	Prof. Adnan Qayoom
10	Design and fabrication of electric car prototype.	4	Prof. Adnan Qayoom.
11	Airfoil dynamics measurement system.	4	Prof.G.A.Harmain
12	Intelligent braking system.	6	Prof. Adnan Qayoom
13	Stair climbing, smart wheel chair	4	Dr.M.S.Charoo
14	Intelligent wing aircraft.	5	Prof.G.A.Harmain
15	Automatic Hacksaw machine.	5	Dr.M.S.Charoo.
16	Design and fabrication of setup for water production from humid air using desiccant material	5	Dr.M.S.Charoo.
17	Fabrication of low cost CNC router.	5	Mr. G.M. Sheikh
18	Implementation of quality function deployment in health sector.	4	Mr. Saad Parvez

Project Areas	BATCHES		
	2011-2015	2012-2016	2013-2017
Design	05	08	10

Thermal/ Fluid	02	01	04
Manufacturing Process	02	02	02
Industrial	02	01	02
Project areas of students from 2015 to 2017			

C. Project related to industry (3)

- The students are encouraged to take up the industry related projects. This objective is attained by choosing a problem from the industry where the students have undergone the practical training at the lower semester. During the practical training the students encounter different problems which they choose their final year project.

D. Process for monitoring and evaluation (2)

The project work is divided into small components. Each component of the work is assigned to each student in the group. The supervisor maintains a diary regarding the work carried out by the students working under him. The supervisor interacts periodically usually after 1 week with the students to determine the progress and to evaluate the contribution of each student. Thus a fool proof monitoring and evaluation is ensured. The departmental project evaluation committee meets twice in 7th and 8th semester to assess the progress of the projects. The projects are evaluated by the committee according to the following scheme.

Criteria	Marks
% of work completed	10
Fulfilment of POs, PSOs & COs	10
Complete Design	10
Presentation	20
Knowledge	20
Response to questions	30
Total	100
Project Evaluation Committee Criteria Marks Awarded	

E. Process to assess individual and team performance (3)

- As has been stated above the students remain in constant touch with the supervisor. During the interaction the supervisors enquires from the team member about the progress both at the individual and the team level. This process helps the supervisor to determine

the performance of the individual and the team. The students are awarded marks during this interaction also by the supervisor so that none of the students lags behind and develop a quality to work individually and with the team. The evaluation committee divides the presentation of the project group among the students such that all the students in the group such that each student presents his share of work and accordingly the committee evaluates the individual and team performance.

F. Quality of completed projects/ working prototypes (5)

- In order ensure the quality work, a departmental committee is constituted comprising of all supervisors as members and HOD as chairman. At the end of 7th semester students are advised to present the work completed so far in front of the committee.

Each student presents the content of work he has contributed, by PPT. The presentation is followed by the question-answer session. Based on the question answer session marks are awarded to the students. The committee also advises the students regarding the deficiencies or modifications in the project. During this session the students also take feedback from committee members about the possible changes.

The final exam of the project work is held at the end of the 8th semester. A committee constituted by the HOD and approved by the director, comprising of the departmental members, an external member of the sister department (nominated by the director) and HOD as chairman examines project. A PPT presentation is given by the students one by one in the group in front of the committee. The presentation is followed by the question - answer session and the examination of the prototype developed. The committee members record the marks awarded to each student which are then submitted to the HOD and final award is arrived at.

In order to encourage the students to take up good projects, the committee also ranks the projects on the basis of

- 1) Immediate practical applications
- 2) Technological ethics
- 3) Local need
- 4) Environmental friendly
- 5) Cost effectiveness

2.2.4 Initiatives related to industry interaction (10)**A. Industry supported laboratories (2)**

1. Tribology lab
2. Condition monitoring lab
3. Lubrication Lab
4. Advanced Strength of material lab

B. Industry involvement in the program design and curriculum (3)

As has been stated in the process for designing the program curriculum (2.1.1) an important feedback is sought from employer (industry) where the students have been placed so that the performance of the students is enquired. Depending upon the performance as revealed by the feedback of the employer necessary changes are made in the curriculum.

Mechanical Engineering Department National Institute of Technology, Srinagar EMPLOYER SURVEY FORM				
The purpose of this survey is to obtain Employer's input on the quality of education of undergraduate programs in NIT, Srinagar. Your sincere cooperation would enable us to improve the quality of our graduates as per your requirements				
Name of Company/ Organization				
Mailing address				
Sector Private/Public/Academia				
What are the pertinent employability skills to stay updated in current industry trends and thereby improve 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. Put tick mark Knowledge, Skills, Abilities, Attitude and other Attributes expected out of NIT Srinagar graduates.				
No.	Overall, are you satisfied with	Excellent (3)	Good (2)	Satisfied (1)
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 life-long 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 differentiation of management techniques and possession of leadership skills that enable successful function of multi-disciplinary teams.			

C. Industry involvement in partial delivery of any courses for students (3)

- Expert lectures enriches the students and faculty members with the latest updates from the industry.
- The eminent personalities of various fields and stalwarts of the industry are invited to lend valuable information from their first-hand experience which serves as an ideal platform for the students.
- The department organizes expert lectures on various topics and issues related to the curriculum of Engineering in which distinguished technocrats are invited to deliver their expert lecture for the scholastic enhancement of the students and the staff.
- There is always an endeavour to create opportunities for students to learn and interact with the industry experts.

The lectures result in lively discussion thus imparting current state of the art knowledge to students and staff.

Year	Number of lectures delivered
2015	7
2016	5
2017	5
Industry involvement in course delivery	

D. Impact analysis of industry institute interaction and actions taken (2)

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

A. Industry training /tours for students (2)

Industrial training/tours are organized at 7th and 8th semester levels when the students are fully acquainted with the different streams of mechanical engineering. Following 1 day tours were organized in 2015 to 2017

2015	2016	2017	2018
1	Nil	1	Planned for the month of June and July

B. Industrial / internship/ summer training of more than two weeks and post training assessment (3)

It constitutes an important component of the curriculum of the department.

DETAILS OF INDUSTRIAL TRAINING ATTENDED BY STUDENTS**AY - 2016-17**

Student	En. Roll	Name Of Industry	From	To	Days
Rohin Sangotra	9/13	Bharat Heavy Electrical Limited ,Ranipura, Haridwar	18/12/15	31/1/16	44
Ashish Kumar	47/13	NTPC Limited	15/12/15	15/1/16	32
Rahul Kumar	56/13	ONGC Limited Surat	8/12/15	7/1/16	30
Lavish Singh Chib	26/13	Bharat Heavy Electrical Limited ,Ranipura, Haridwar	18/12/15	31/1/16	44
Ankit Kumar Gupta	73/13	ONGC Limited Surat	15/12/15	15/1/16	32
Mukha Ram Saran	58/13	Indian Oil Corporation Limited, Vadodara ,Gujrat	7/12/15	2/1/16	27
Sharik Shabir Siddiqi	50/13	RINL, Pride Of Steel	25/1/16	20/2/16	27
Asutosh Boro	20/13	DRDO Ministry of Defence	11/1/16	29/2/16	50
Votti Shyam Sai	68/13	RINL, Prid of Steel	25/1/16	20/2/16	27
Mohammad Sareebhakak	11/13	Maruti Suzuki Gurgaon	5/12/15	16/1/16	43
Mohammad Kamran	16/13	Rourkela Steel Plant Odisha	4/1/16	3/2/16	31
Sobiya Maqbool	22/13	Maruti Suzuki Gurgaon	5/12/15	16/1/16	43

Prashant Ratan	66/13	Bhushan Steel Ltd	28/12/15	31/1/16	35
Kana Ram	62/13	Indian Oil Corporation Limited, Vadodara ,Gujrat	7/12/15	2/1/16	27
Arjun Singh	46/13	Nhpc Salal Power Station	26/12/15	1/2/16	38
Tarun Bhagat	43/13	J&K State Road Transport Corporation	8/1/16	22/2/16	46
Sudhanshu Raj	42/13	Pwd Lucknow	15/12/15	29/2/16	46
Rohit Gupta	28/13	Kanti Bijlee Utpadan Nigam Ltd.Kbun , Muzaffarpur	15/12/15	13/1/16	30
Khalid Shabir	12/13	Rourkela Steel Plant Odisha	4/1/16	3/2/16	31
Arjumand Mahak	5/13	Maruti Suzuki India Limited	5/12/15	22/1/16	49
Deeksha Bhatnagar	34/13	Maruti Suzuki India Limited	5/12/15	16/1/16	43
Manish Meena	55/13	Indian Oil Corporation Limited, Vadodara ,Gujrat	7/12/15	2/1/16	27
Sushil Kumar Parsoya	60/13	Indian Oil Corporation Limited, Vadodara ,Gujrat	7/12/15	2/1/16	27
Shekhar Suman	59/13	Maruti Suzuki India Limited	5/12/15	16/1/16	43
Nitish Malpotra	23/13	Bharat Heavy Electrical Limited ,Ranipura, Haridwar	18/12/15	31/1/16	45
Harjyot Singh	195/11	Salal Power Station Jyotipuram (Nhpc Ltd) Reasi J&K	31/12/13	13/2/14	43
Apoorve Sharma	27/13	Bharat Heavy Electrical Limited ,Ranipura, Haridwar	18/12/15	31/1/16	45
Jitendra Kumar	52/13	Ck Birla Group Nbc Flexible Solution	8/1/16	22/2/16	46
Rahul Singh	61/13	Indian Oil Corporation Limited, Vadodara ,Gujrat	7/12/15	2/1/16	27
Surendra Kumar	49/13	Ck Birla Group Nbc Flexible Solution	8/1/16	22/2/16	46
Devanshu Gupta	63/13	Esrg Group			
Sushan Kuchroo	38/13	Bharat Heavy Electrical Limited ,Ranipura, Haridwar	18/12/15	31/1/16	45
Gh Mustafa Mir	3/13	Rsb Transmission (I) Ltd	15/12/15	14/2/16	59
N Srujan Kumar	65/13	South Central Railway	17/1/16	13/2/16	28
Sapan Deep	45/13	Salal Power Station Jyotipuram (NHPC Ltd) Reasi J&K	26/12/15	1/2/2016	36
Adarsh Gangwar	18/13	Him Teknoforge Ltd	1/1/2016	10/2/2016	41
Nirban Shakti Singh	13/13	Indian Oil Corporation Limited, Vadodara ,Gujrat	7/12/15	2/1/16	27

Saifan Rafiq	10/13	Maruti Suzuki India Limited	5/12/15	30/1/16	57
Prabhneet Singh Soin	74/13	Maruti Suzuki India Limited	5/1/16	16/2/16	43
Maheshprashad	8/13	Him Teknoforge Ltd	1/1/16	10/2/16	41
Daman Lal Bhuarya	71/13	Bhilai Steel Plant	14/12/15	9/1/16	27
Asim Yousuf	33/13	Rourkela Steel Plant Odisha	4/1/16	3/2/16	31
Aman Gupta	70/13	Him Teknoforge Ltd	1/1/16	10/2/16	41
Noumaan Bashir Khan	69/13	RSB	15/12/15	14/2/16	31
Irfan Mushtaq Qureshi	30/13	Vizag Steel Plant	25/1/16	20/2/16	27
Shahid Shabir Bhat	54/13	RSB	15/12/15	14/2/16	31
Mohd. Ikram	76/13	Indian Oil Corporation Limited	7/12/15	2/1/16	27
Anmol	25/13	NHPC Salal Power Station	26/12/15	1/2/16	38
Devendra Yadav	4/13	Maruti Suzuki India Limited	11/1/16	27/2/16	48
Amir Yousf Sofi	35/13	Vizag Steel Plant	25/1/16	20/2/16	27
Amir Yousuf Bhat	24/13	Vizag Steel Plant	25/1/16	20/2/16	27
N Srujan Kumar	65/13	South Central Railway	17/1/16	13/2/16	28
Yogesh Sahu	6/13	Maruti Suzuki India Limited	11/1/16	26/2/16	47
S Himavanth Akhil Sai	53/13	Mithra Auto Agencies Pvt Ltd	18/1/16	26/2/16	40
Chitta Hari Bharath	75/13	Vizag Steel Plant	25/1/16	20/2/16	27
Bodala Rajashekhar	19/13	Vizag Steel Plant	25/1/16	20/2/16	27
Ishan Raina	21/13	Nhpc Salal Power Station	26/12/15	1/2/16	38
Ankush Talgotra	41/13	Nhpc Salal Power Station	29/12/15	6/2/16	40
L Gaurav Singha	14/13	Ongc , Srikona	8/1/16	6/2/16	30
Utkarsh Singh	67/13	Bhushan Steel Limited	28/12/15	31/1/16	35
Varun Kundan	40/13	Bhel Haridwar	18/12/15	31/1/16	45
Tarun Pandey	15/13	Bhel Haridwar	18/12/15	31/1/16	45
Abhishek Yadav	7/13	Automag	1/1/16	14/2/16	45
Nasir Hussain	48/13	Nhpc Limited	7/1/16	17/2/16	42
Felis Saransh Goja	31/13	Maruti Suzuki India Limited	5/1/16	16/2/16	43

Post training assessment of the practical training is evaluated at the end of the 7th semester, by a committee constituted by the HOD. It carries 2 credits. The students give a PPT wherein they give a detailed report of the work done. The presentation is followed by an interaction session. The students are compulsorily supposed to submit a hard copy of the work done and is maintained in department as record. The credits are awarded based on the presentation, interaction and the practical training record.

C Impact analysis of industrial training (2)

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 the students at the end of 8th semester to assess the achievement of the objectives of the industrial training/ summer training/internship/ industrial tour.

D Student feedback on initiative (3)

Feedback Form to Assess the Industrial Training									
Name of the student:					Enrollment 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 about the practical aspects in 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 permanent employee									
Excellent	<input type="checkbox"/>	Good	<input type="checkbox"/>	Average	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>

D. Students feedback on initiative (industrial training)

The students' feedback is obtained at the end of 8th semester to evaluate the industrial training effectiveness. The feedback is evaluated and action is taken accordingly. The action includes.

1. The management of the industry is informed formally regarding the feedback so that the corrective action (if required) is taken by the management so that the quality of the industrial training does not get affected.
2. If the students are not satisfied with the training imparted at the industry, the students are not permitted to undergo training in that industry in future.

Feedback form for students undergone industrial training

Students Name:

Year:

Enroll No.

1. Name of the industry:

2. Area in which the student has undergone training:

3. Did the you get hands on experience on the facilities in the plant?

Excellent **Good** **Average** **Fair** **Poor**

4. Did you become aware of any new technologies in relation to what they have learnt in the corresponding subject? y/n

5. Were you able to analyze the facilities layout of the plant and could you suggest any improvement? y/n

6. How do you rank the working culture an atmosphere in the plant?

Excellent **Good** **Average** **Fair** **Poor**

Based on the information obtained from the feedback forms the rating is done as

Year:				
Feedback (%)	No. of Students		Feedback (%)	No. of Students
41-50			71-80	
51-60			81-90	
61-70			91-100	

2. Alumni Survey

National Institute of Technology Srinagar Alumni Survey Form		
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		
Alumni name		
Year of Graduation		
Mailing address		
Placement	Before/after graduation	Core/Software
Name of the Company		
Please rate each of the following skills, abilities or attributes in terms of their importance to state how well your education at Mechanical Engineering Department, National Institute of Technology, Srinagar prepare you for these.		
Skills, Abilities and Attributes	Scale (1 to 5) Excellent to poor	
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		
Awareness 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 English language in both communicative and technical forms		
Awareness of the need for life-long learning (Seeking further education, self-learning, Membership in professional societies)		

Project Management and Finance		
Signature	Suggestion if any:	

2. Employer Survey

<p align="center">Mechanical Engineering Department <u>National Institute of Technology, Srinagar</u> EMPLOYER SURVEY FORM</p>				
<p>The purpose of this survey is to obtain Employer's input on the quality of education of undergraduate programs in NIT, Srinagar. Your sincere cooperation would enable us to improve the quality of our graduates as per your requirements</p>				
Name of Company/ Organization				
Mailing address				
Sector Private/Public/Academia				
What are the pertinent employability skills to stay updated in current industry trends and thereby improve the quality of the undergraduate program?	Logical Thinking	Good Aptitude	Excellent Communication	
<p>Rate the NIT Srinagar Graduates working in your organization using the following criterion. Put tick mark Knowledge, Skills, Abilities, Attitude and other Attributes expected out of NIT Srinagar graduates.</p>				
No.	Overall, are you satisfied with	Excellent (3)	Good (2)	Satisfied (1)
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 life-long 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 differentiation of management techniques and possession of leadership skills that enable successful function of multi-disciplinary teams.			
		Signature		
		Name and Designation		

3. In Program Students Survey

National Institute of Technology, Srinagar			
<u>Mechanical Engineering Department</u>			
In-Program Student Survey Form			
Name:		Year Passed out:	
Email:		Phone	
Assessment of Knowledge, Skills, Abilities and Attributes presently acquired at NIT Srinagar			
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 the your choice)			
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>	<i>Not 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>	<i>Not Satisfied</i>
3	Ability to conduct experiments, analyse data, and present results. <i>If not satisfied give your suggestions to improve</i>		
	<i>Extremely Satisfied</i>	<i>Satisfied</i>	<i>Not 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>	<i>Not 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>	<i>Not 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>	<i>Not 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>	<i>Not 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>	<i>Not 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>	<i>Not 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>	<i>Not Satisfied</i>

Signature:

Date:

4. Exiting Students Survey

Mechanical Engineering Department National Institute of Technology, Srinagar Exiting Students Survey			
Name:		En. Roll.No:	
Phone No.		Email:	
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.			
1	Basic knowledge in mathematics, science, engineering and humanities.		
	Extremely Satisfied	Satisfied	Not Satisfied

2	Ability to identify, design, analyse and solve mechanical engineering problems		
	Extremely Satisfied	Satisfied	Not Satisfied
3	Ability to identify, design, analyse and solve mechanical engineering problems		
	Extremely Satisfied	Satisfied	Not Satisfied
4	Design/ development of complex engineering problems and their solutions		
	Extremely Satisfied	Satisfied	Not Satisfied
5	Use of research-based knowledge and research methods		
	Extremely Satisfied	Satisfied	Not Satisfied
6	Demonstrate the ability to apply advanced technologies to solve contemporary and new problems		
	Extremely Satisfied	Satisfied	Not Satisfied
7	Awareness to apply engineering solutions in global, national and societal contexts		
	Extremely Satisfied	Satisfied	Not Satisfied
8	Understanding professional engineering solutions in societal and environmental contexts		
	Extremely Satisfied	Satisfied	Not Satisfied
9	Understanding professional engineering solutions in societal and environmental contexts		
	Extremely Satisfied	Satisfied	Not Satisfied
10	Understanding of professional and ethical responsibility		
	Extremely Satisfied	Satisfied	Not Satisfied
11	Ability to function as an effective member in multi-disciplinary teams		

	Extremely Satisfied	Satisfied	Not Satisfied
12	Proficient in English language in both communicative and technical forms		
	Extremely Satisfied	Satisfied	Not Satisfied
13	Demonstrate the ability to choose and apply appropriate resource management techniques		
	Extremely Satisfied	Satisfied	Not Satisfied
14	Capable of self-education and clearly understand the value of updating their professional knowledge to engage in life-long learning		
	Extremely Satisfied	Satisfied	Not Satisfied
15	Ability to integrate theory and practice to construct systems of varying complexity		
	Extremely Satisfied	Satisfied	Not Satisfied
16	Ability to apply mechanical engineering skills, tools and mathematical techniques to analyse, design and model complex systems		
	Extremely Satisfied	Satisfied	Not Satisfied
17	Ability to design and manage small-scale projects to develop a career in mechanical engineering		
	Extremely Satisfied	Satisfied	Not Satisfied

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:

CRITERION 3	COURSE OUTCOMES AND PROGRAM OUTCOMES	175
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3. COURSE OUTCOMES AND PROGRAM OUTCOMES

Program Specific Outcomes (PSOs)

PSO	Statement
PSO1	Graduates should be creative, imaginative and proficient mechanical engineers employable to serve in the industry, government and allied services
PSO 2	Graduates should be able to advance in academic and research pursuits in mechanical and allied disciplines
PSO 3	Graduates should take a lead in innovation and entrepreneurship activities with high standards of professional and moral ethics and prove themselves beneficial to society at large

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

3.1.1. Course Outcomes (COs)

Table 3.1.1 COs of one course per semester from 3rd to 8th Semester

On successful completion of this course, students should be able to

S. No.	Course	COURSE OUTCOMES	
1	Mechanics of Materials –I MEC 302	CO1	Analyse the behaviour of the solid bodies subjected to various types of loading
		CO2	Apply knowledge of materials and structural elements to simple structures and their relation with sustainable development
		CO3	Undertake structural problem identification, formulation and solution using a range of analytical methods
2	Theory of Machines-I MEC 403	CO1	Understand the basic concept of machines and mechanisms
		CO2	Comprehend laws of friction and their applications in problem solving
		CO3	Understand the functioning, analysis and control of various machines and their transmission elements
3	Heat Transfer	CO1	Understand the basic principles of conduction, radiation and convection heat transfer

		CO2	Apply the basic principles of heat transfer in the analysis and design of engineering systems
		CO3	Solve wide range of real life problems involving combined modes of heat transfer
4	Fundamentals of Tribology MEC 603	CO1	Understand the basic principle of surface roughness
		CO2	Analyse the nature and behaviour of wear and the type of lubricant used for a specific type of wear
		CO3	Formulate the mathematical model for the analysis of wear
5	Industrial Engineering- II MEC703	CO1	Monitor quality characteristics of a product/service by the application of statistical quality control (SQC) techniques
		CO2	Understand critical operating measures of supply chain performance and link them to key financial measures
		CO3	Contribute the profitable growth of industrial economic sector by using IE analytical tools, effective computational approaches, and system thinking methodologies
6	Final Year Project MEC 805	CO1	Demonstrate a wide range of the skills learned during the course of study by delivering a complete and original design of a mechanical engineering system
		CO2	Get acquainted with development, analysis, evaluation, and problem solving and design skill
		CO3	Use innovative ideas to solve simple/complex engineering problems

3.1.2. CO-PO and CO-PSO matrices of courses selected in 3.1.1 (six matrices: one per semester from 3rd to 8th semester)

The various correlation levels are:

- “1” – Slight (Low) Correlation
- “2” – Moderate (Medium) Correlation
- “3” – Substantial (High) Correlation
- “-” indicates there is no correlation.

3.1.2 (a) CO-PO matrices of courses selected in 3.1.1

Table 3.1.2 (a) CO-PO Mapping of selected courses

Course	Course Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
MEC 201.1	Machine Drawing	2	1	-	-	-	1	1	2	-	-	-	2
MEC 201.2	Machine Drawing	2	2	-	-	-	1	1	2	-	-	-	2
MEC 201.3	Machine Drawing	2	2	-	-	-	1	1	2	-	-	-	2
MEC 201.4	Machine Drawing	2	2	-	-	-	1	1	2	-	-	-	2
MEC 302.1	Mechanics of Material-I	3	3	3	1	1	2	-	1	-	-	-	2
MEC 302.2	Mechanics of Material	3	3	3	1	1	2	3	2	-	-	-	2
MEC 302.3	Mechanics of Material	3	3	3	1	1	2	-	3	-	-	-	2
MEC 303.1	Fluid Mechanics	3	2	1	2	-	1	1	2	-	-	-	2
MEC 303.2	Fluid Mechanics	2	2	1	2	-	1	1	2	-	-	-	2
MEC 303.3	Fluid Mechanics	3	2	1	2	-	1	1	2	-	-	-	2
MEC 304.1	Engineering Thermodynamics	3	3	2	1	1	2	-	1	-	-	-	2
MEC 304.2	Engineering Thermodynamics	3	3	2	1	1	2	-	2	-	-	-	2
MEC 304.3	Engineering Thermodynamics	3	3	3	1	1	2	-	2	-	-	-	2
MEC 403.1	Theory of Machines-I	3	2	1	2	-	1	1	2	-	-	-	2
MEC 403.2	Theory of Machines-I	2	2	1	2	-	1	1	2	-	-	-	2
MEC 403.3	Theory of Machines-I	3	2	1	2	-	1	1	2	-	-	-	2
MEC 401.1	Materials Science	3	2	1	2	-	1	1	2	-	-	-	2
MEC 401.2	Materials Science	2	2	1	2	-	1	1	2	-	-	-	2
MEC 401.3	Materials Science	3	2	1	3	2	1	1	2	-	-	-	2
MEC 502.1	Machine Design-I	2	2	1	1	1	2	1	1	-	-	-	2
MEC 502.2	Machine Design-I	2	1	1	1	1	2	1	1	-	-	-	2
MEC	Machine Design-I	2	2	3	2	1	3	3	2	-	-	-	2

502.3													
MEC 502.4	Machine Design-I	2	2	1	1	1	2	1	1	-	-	-	2
MEC 504.1	Heat Transfer	3	2	1	2	-	1	1	2	-	-	-	2
MEC 504.2	Heat Transfer	2	2	3	2	-	1	1	2	-	-	-	2
MEC 504.3	Heat Transfer	3	2	1	3	-	3	1	2	-	-	-	2
MEC 505.1	Industrial Engineering-I	2	2	3	2	1	2	2	2	-	-	-	2
MEC 505.2	Industrial Engineering-I	2	2	3	2	1	2	2	2	-	-	-	2
MEC 505.3	Industrial Engineering-I	1	1	1	1	2	2	2	1	1	2	1	2
MEC 603.1	Fundamentals of Tribology	3	2	1	2	-	1	1	2	-	-	-	2
MEC 603.2	Fundamentals of Tribology	2	2	1	2	-	1	1	2	-	-	-	2
MEC 603.3	Fundamentals of Tribology	3	2	1	2	-	1	1	2	-	-	-	2
MEC 604.1	Linear Optimization in Engineering	3	2	2	1	-	1	-	-	-	-	2	2
MEC 604.2	Linear Optimization in Engineering	3	2	2	1	2	2	3	2	2	2	1	2
MEC 604.3	Linear Optimization in Engineering	3	2	2	1	2	2	3	2	2	2	1	2
MEC 604.4	Linear Optimization in Engineering	3	2	2	1	2	2	3	2	2	2	1	2
MEC 606.1	Seminar	2	3	1	1	1	1	1	1	1	2	1	2
MEC 606.2	Seminar	-	2	-	1	-	1	2	1	-	2	-	2
MEC 606.3	Seminar	-	-	-	-	-	-	1	1	-	3	-	2
MEC 703.1	Industrial Engineering-II	1	1	2	1	3	1	2	2	1	1	-	2
MEC 703.2	Industrial Engineering-II	-	1	-	-	-	2	2	1	1	-	3	2
MEC 703.3	Industrial Engineering-II	-	-	-	-	2	1	2	1	2	1	2	2
MEC 706.1	Final Year Project	2	2	2	2	-	2	1	2	2	2	-	3

MEC 706.2	Final Year Project	1	2	2	2	-	2	1	2	2	2	-	3
MEC 706.3	Final Year Project	1	3	2	1	-	1	3	2	1	-	1	3
MEC-801.1	Production and Operation Management	2	2	-	-	-	-	-	-	-	-	-	2
MEC-801.2	Production and Operation Management	1	2	1	2	1	-	2	1	-	1	1	2
MEC-801.3	Production and Operation Management	1	2	1	2	1	2	3	1	-	3	2	2
MEC 805.1	Final Year Project	2	2	2	2	-	2	1	2	2	2	-	3
MEC 805.2	Final Year Project	1	2	2	2	-	2	1	2	2	2	-	3
MEC 805.3	Final Year Project	1	3	2	1	-	1	3	2	1	-	1	3

3.1.2 (b) Course Outcome – Program specific Outcome Mapping

Course	CO \ PSO	PSO1	PSO2	PSO3
MEC 201.1	Machine Drawing	3	2	2
MEC 201.2	Machine Drawing	3	2	2
MEC 201.3	Machine Drawing	3	2	2
MEC 201.4	Machine Drawing	3	2	2
MEC 302.1	Mechanics of Material-I	3	2	2
MEC 302.2	Mechanics of Material-I	3	2	3
MEC 302.3	Mechanics of Material	2	2	2
MEC 303.1	Fluid Mechanics	3	3	2
MEC 303.2	Fluid Mechanics	3	3	2
MEC 303.3	Fluid Mechanics	3	3	2
MEC 304.1	Engineering Thermodynamics	3	3	2

MEC 304.2	Engineering Thermodynamics	3	3	3
MEC 304.3	Engineering Thermodynamics	3	3	3
MEC 403.1	Theory of Machines-I	3	3	2
MEC 403.2	Theory of Machines-I	3	3	2
MEC 403.3	Theory of Machines-I	3	3	2
MEC 401.1	Materials Science	3	3	2
MEC 401.2	Materials Science	3	3	2
MEC 401.3	Materials Science	3	3	2
MEC 502.1	Machine Design-I	3	3	2
MEC 502.2	Machine Design-I	3	3	2
MEC 502.3	Machine Design-I	3	3	2
MEC 502.4	Machine Design-I	3	3	2
MEC 504.1	Heat Transfer	3	3	2
MEC 504.2	Heat Transfer	3	3	2
MEC 504.3	Heat Transfer	3	3	2
MEC 505.1	Industrial Engineering-I	3	3	3
MEC 505.2	Industrial Engineering-I	3	3	2
MEC 505.3	Industrial Engineering-I	3	3	3
MEC 603.1	Fundamentals of Tribology	3	3	2
MEC 603.2	Fundamentals of Tribology	3	3	2
MEC 603.3	Fundamentals of Tribology	3	3	2
MEC 604.1	Linear Optimization in Engineering	3	3	2
MEC 604.2	Linear Optimization in Engineering	3	3	3

3.1.3. Program level **Course-PO and Course-PSO** matrices of all courses (10)3.1.3 (a) Program level **Course-PO** matrix of all courses INCLUDING first year courses

Semester	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
S1													
S2													
	MEC 201	3	1	1	1	1	1	1	1	2	1	1	1
S3	MEC 301	3	2	2	2	1	1	2	3	1	1	1	3
	MEC 302	3	2	2	2	1	1	2	3	1	1	1	3
	MEC 303	3	3	3	3	2	3	3	3	1	1	1	3
	MEC 304	3	3	3	3	2	3	3	3	1	1	1	3
	MEC 305	3	2	2	2	1	1	2	3	1	1	1	3
	MEC 306	3	3	3	3	2	3	3	3	1	1	1	3
	MTH 304	3	3	3	3	2	3	3	3	1	1	1	3
	MEC 302P	3	3	3	3	2	3	3	3	1	1	1	3
	MEC 303P	3	2	2	2	1	1	2	3	1	1	1	3
	MEC 305P	3	3	3	3	2	3	3	3	1	1	1	3
S4	MEC 401	3	2	2	1	1	2	2	2	1	1	1	3

	MEC 402	3	2	2	1	1	2	2	2	1	1	1	3
	MEC 403	3	3	3	3	2	3	2	3	2	2	2	3
	MEC 404	3	2	2	1	1	2	2	2	1	1	1	3
	MEC 405	3	2	2	2	1	1	2	3	1	1	1	3
	ELE 406	3	3	3	3	2	3	3	3	1	1	1	3
	MEC 403P	3	3	3	3	2	3	3	3	1	1	1	3
	MEC 404P	3	2	2	2	1	1	2	3	1	1	1	3
	MEC 405P	3	3	3	3	2	3	3	3	1	1	1	3
	ELE 407P	3	2	2	1	1	2	2	2	1	1	1	3
S5	MEC 501	3	2	2	1	1	2	2	2	1	1	1	3
	MEC 502	3	3	2	2	1	2	1	3	2	2	2	3
	MEC 503	3	3	3	3	1	2	2	3	1	1	1	3
	MEC 504	3	3	3	3	1	2	2	3	1	1	1	3
	MEC 505	3	3	2	2	1	2	1	3	2	2	2	3
	ECE 508	3	3	3	3	1	2	2	3	1	1	1	3
	MEC 501P	3	3	3	3	1	2	2	3	1	1	1	3
	MEC 504P	3	3	3	3	1	2	2	3	1	1	1	3
	MEC 505P	3	3	2	2	1	2	1	3	2	2	2	3
	ECE 508P	3	3	2	2	1	2	1	3	2	2	2	2
S6	MEC 601	3	3	3	3	1	2	2	3	1	1	1	3
	MEC 602	3	3	2	2	1	2	1	3	2	2	2	3
	MEC 603	3	3	2	2	1	2	1	3	2	2	2	2
	MEC 604	3	3	2	2	3	2	3	2	3	3	3	3
	MEC 605	3	3	2	2	3	2	3	2	3	3	3	3
	MEC	3	2	1	2	2	2	2	2	2	1	3	2

	606												
	MEC 603P	3	3	3	3	3	3	3	3	2	2	3	3
	MEC 605P	3	2	1	2	2	2	2	2	1	3	2	3
S7	MEC 701	3	3	3	3	3	3	3	3	2	2	3	3
	MEC 702	3	3	2	2	1	2	3	3	3	3	3	3
	MEC 703	3	3	3	3	3	3	3	3	2	2	3	3
	MEC 704	3	3	2	2	1	2	3	3	3	3	3	3
	MEC 705	3	3	3	3	3	3	3	3	2	2	3	3
	MEC 706	3	3	2	2	1	2	3	3	3	3	3	3
	MEC 707	3	3	3	3	3	3	3	3	2	2	3	3
	MEC 703P	3	3	2	2	1	2	3	3	3	3	3	3
	MEC 705P	3	3	2	2	1	2	3	3	3	3	3	3
	S8	MEC 801	3	3	3	3	3	3	3	2	3	2	3
MEC 802		3	3	3	3	3	3	3	2	3	2	3	3
MEC 803		3	3	2	2	1	2	3	3	3	3	3	3
MEC 804		3	3	2	2	1	2	3	3	3	3	3	3
MEC 805		3	3	2	2	1	2	3	3	3	3	3	3
MEC 802P		3	3	3	3	3	3	3	2	3	2	3	3

3.1.3 (b) Program level Course-PSO matrix of all courses

Semester	Course	PSO1	PSO2	PSO3
S1				

S2				
	MEC 201	3	1	1
S3	MEC 301	3	2	2
	MEC 302	3	2	2
	MEC 303	3	3	3
	MEC 304	3	3	3
	MEC 305	3	2	2
	MEC 306	3	3	3
	MTH 304	3	3	3
	MEC 302P	3	3	3
	MEC 303P	3	2	2
	MEC 305P	3	3	3
	S4	MEC 401	3	2
MEC 402		3	2	2
MEC 403		3	3	3
MEC 404		3	2	2
MEC 405		3	2	2
ELE 406		3	3	3
MEC 403P		3	3	3
MEC 404P		3	2	2
MEC 405P		3	3	3
ELE 407P		3	2	2
S5	MEC 501	3	2	2
	MEC 502	3	3	2
	MEC 503	3	3	3
	MEC 504	3	3	3
	MEC 505	3	3	2
	ECE 508	3	3	3
	MEC 501P	3	3	3
	MEC 504P	3	3	3

	MEC 505P	3	3	2
	ECE 508P	3	3	2
S6	MEC 601	3	3	3
	MEC 602	3	3	2
	MEC 603	3	3	2
	MEC 604	3	3	2
	MEC 605	3	3	2
	MEC 606	3	2	1
	MEC 603P	3	3	3
	MEC 605P	3	2	1
S7	MEC 701	3	3	3
	MEC 702	3	3	2
	MEC 703	3	3	3
	MEC 704	3	3	2
	MEC 705	3	3	3
	MEC 706	3	3	2
	MEC 707	3	3	3
	MEC 703P	3	3	2
	MEC 705P	3	3	2
S8	MEC 801	3	3	3
	MEC 802	3	3	3
	MEC 803	3	3	2
	MEC 804	3	3	2
	MEC 805	3	3	2
	MEC 802P	3	3	3

3.2. Attainment of Course Outcomes (75)

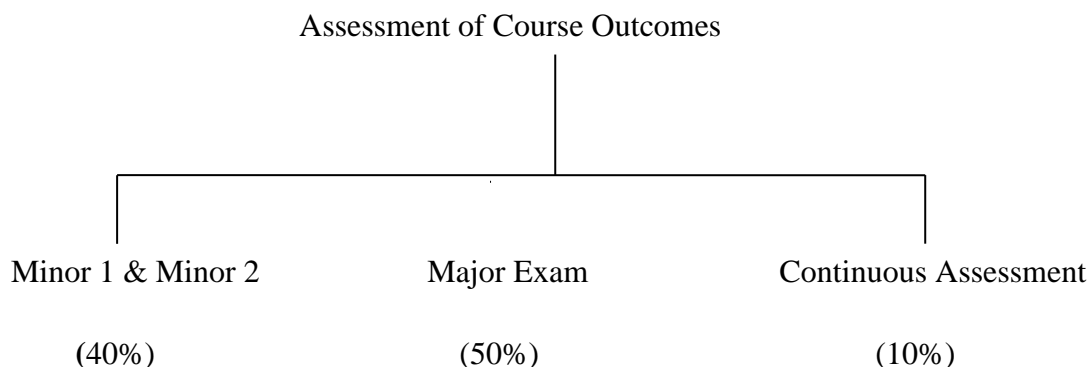
3.2.1. Describe the assessment tools and processes used to gather the data upon which the evaluation of Course Outcomes is based (10)

Up to December 2016

(i) CO Assessment Rubrics:

Course Outcome is evaluated based on the performance of students in two minor exams, one major examination and continuous assessment (in the form of assignments and quizzes). The

contributions are 40%, 50% and 10% for the minor exams, major exam and continuous assessment respectively.



(ii) CO Assessment Tools:

The various assessment tools used to evaluate COs and the frequency with which the assessment

processes are carried out are listed in Table 3.2.1 (a).

Table 3.2.1 (a) Direct Assessment Tools

Course		Assessment Tools	Frequency
Theory		Minors	Twice/course
		Continuous Assessment	Weekly
		Major	Once/course
Lab		Continuous Assessment (Report, Experiments)	Daily
		Major Lab Exam (Viva Voce, perform a given experiment)	Once/lab course
Seminar		Presentation	Twice/Course
		Report	Once/course
Project	7 th Semester	Mid-Term Evaluation	Once/course
		End- Term Evaluation	Once/course
	8 th Semester	Mid-Term Evaluation	Once/course
		End- Term Evaluation (Demonstration and evaluation by External Examiner)	Once/course

(iii) Quality / Relevance of Assessment Process:**Theory:**

Minor tests: Two Minor tests serve to encourage students to keep up with subject matter covered in class. These are of 1-hour duration each and are evaluated for 20 marks each. The questions are framed in such a way that they 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.

Major test: A Major exam is held at the end of every semester to evaluate the student performance. The exam is of 2 hours' duration and is evaluated for 50 marks. The questions are framed in such a way that they satisfy blooms taxonomy, wherein each question is mapped to the appropriate course outcome.

Continuous assessment: Continuous assessment in the form of assignments, oral quizzes, MCQ quizzes and presentations are the qualitative performance assessment tools designed to assess students' knowledge of engineering practices, framework and problem solving. Students are assigned course-related work, and their submissions are graded on the basis of work quality and originality. Continuous assessment is evaluated for 10 marks. The questions in the assignment are mapped to the Course Outcomes of the subject.

Lab:

Lab courses provide students with first-hand experience with course concepts and the opportunity to explore experimental methods used in their discipline.

Continuous assessment: 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.

Continuous assessment constitutes 50% of the total marks of a lab course.

Major lab exam: A major 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. The exam includes viva voce and performing a given experiment. The weightage for the major lab exam is 50% of the total marks of a lab course.

Seminar:

Seminar is a part of sixth semester curriculum. The student makes two seminar presentations (preliminary and a final) on a topic of his/her choice and approved by the assigned faculty. Seminar presentation is planned for the duration of 30 minutes including a question-answer session of 5 to 10 minutes. Seminar is evaluated based on the presentation by the students before an evaluation committee consisting of three faculty members including Head of the department. The committee evaluates seminar based on following parameters.

Relevance: The seminar power point presentation is oriented at covering the fundamentals as well as advanced topics in the appropriate branch of engineering with references of 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. The effectiveness of the student's response to these queries is assessed.

Report and Documentation: A bona fide report on the seminar topic is submitted at the end of the semester. This report includes, in addition to the presentation materials, all relevant supplementary materials along with detailed answers to all the questions asked/clarifications sought during presentation. All references are to be given toward the end of the report. Students'

ability to comprehend and write effective reports and design documentation is assessed by evaluating the report.

Project:

The Project is intended to be a challenge to the intellectual and innovative abilities and to give students the opportunity to synthesize and apply the knowledge and analytical skills learned in the different subjects. The project work has to be started in the seventh semester and is to be continued in the eighth semester.

Project – 7th Semester:

Students are expected to finalize the project themes/titles with the assistance of an identified faculty member as project guide during first half of the seventh semester. During this the students are required to submit a project plan, relevance of the project proposed, literature survey, objectives, statement of how the objectives are to be tackled, time schedule and cost estimate. Assessment tools used to evaluate project work are:

Mid-term Evaluation: Mid-term evaluation is conducted at the mid of the 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 skills are evaluated by the panel based on their performance.

End term Evaluation: End-term evaluation is conducted at the end of the semester in the form of the presentation. The evaluation 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 –8th Semester:

Mid-term Evaluation: The design part of the proposed work is evaluated. The students' communication skills and depth of knowledge in designing is assessed based on presentation and response to questions asked by the panel comprising of guide, Head of the department and project coordinator. The percentage of work completed, difficulties faced and how the students have 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.

End-Term Evaluation: The end term evaluation includes demonstration and evaluation by the panel of examiners consisting of guide, senior professor, Head of the department and external examiner.

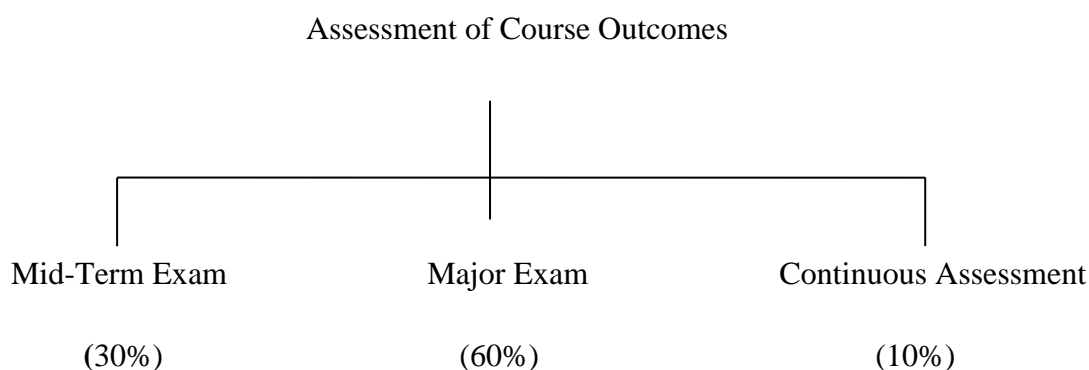
Demonstration: Final demonstration is conducted at the end of the semester to evaluate the completeness and perfection of work done. At the end of the demonstration, the assessment panel asks questions and seeks clarifications on specific issues related to various stages of the project. Responses from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

Evaluation by the panel: The performance of individual student is evaluated by the panel of examiners. The project report submitted by a project group is evaluated by the panel. The panel of examiners analyzes the nature of the project and apart from the technical merit of the work, makes sure that the work is environment friendly, cost effective, ensures safety and ensures adherence to best ethical practices. The projects are classified into different areas and their relevance to PO's and PSO's are identified to ensure its quality. Viva Voce is a part of assessing students' knowledge in engineering courses.

Jan 2017 Onwards

(i) CO Assessment Rubrics:

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



(ii) CO Assessment Tools:

The various assessment tools used to evaluate COs and the frequency with which the assessment processes are carried out are listed in Table 3.2.1 (b)

Course	Assessment Tools	Frequency
Theory	Minors	Once/course
	Continuous Assessment	Weekly

		Major	Once/course
Lab		Continuous Assessment (Report, Experiments)	Daily
		Major Lab Exam (Viva Voce, perform a given experiment)	Once/lab course
Seminar		Presentation	Twice/Course
		Report	Once/course
Project	7 th Semester	Mid-Term Evaluation	Once/course
		End- Term Evaluation	Once/course
	8 th Semester	Mid-Term Evaluation	Once/course
		End- Term Evaluation (Demonstration and evaluation by External Examiner)	Once/course

(iii) Quality / Relevance of Assessment Process:

Theory:

Mid-Term Test: One Mid-Term test serves to encourage students to keep up with subject matter covered in class. This test is of 1 and half hour duration and is evaluated for 30 marks. The questions are framed in such a way that they 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.

Major test: Major test is held in every semester to evaluate the student's performance. The exam is of 2 hours duration and is evaluated for 60 marks. The questions are framed in such a way that they satisfy blooms taxonomy, wherein each question is mapped to the appropriate course outcome.

Continuous assessment: Continuous assessment in the form of assignments, oral quizzes, MCQ quizzes and presentations are the qualitative performance assessment tools designed to assess students' knowledge of engineering practices, framework and problem solving. Students are assigned course-related work, and their submissions are graded on the basis of work quality and originality. Continuous assessment is evaluated for 10 marks. The questions in the assignment are mapped to the Course Outcomes of the subject.

Lab:

Lab courses provide students with first-hand experience with course concepts and the opportunity to explore experimental methods used in their discipline.

Continuous assessment: 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.

Continuous assessment constitutes 50% of the total marks of a lab course.

Major lab exam: A major 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. The exam includes viva voce and performing a given experiment. The weightage for the major lab exam is 50% of the total marks of a lab course.

Seminar:

Seminar is a part of sixth semester curriculum. The student makes two seminar presentations (preliminary and a final) on a topic of his/her choice and approved by the assigned faculty. Seminar presentation is planned for the duration of 30 minutes including a question-answer session of 5 to 10 minutes. Seminar is evaluated based on the presentation by the students before an evaluation committee consisting of three faculty members including Head of the department. The committee evaluates seminar based on following parameters.

Relevance: The seminar power point presentation is oriented at covering the fundamentals as well as advanced topics in the appropriate branch of engineering with references of 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. The effectiveness of the student's response to these queries is assessed.

Report and Documentation: A bona fide report on the seminar topic is submitted at the end of the semester. This report includes, in addition to the presentation materials, all relevant supplementary materials along with detailed answers to all the questions

asked/clarifications sought during presentation. All references are to be given toward the end of the report. Students' ability to comprehend and write effective reports and design documentation is assessed by evaluating the report.

Project:

The Project is intended to be a challenge to the intellectual and innovative abilities and to give students the opportunity to synthesize and apply the knowledge and analytical skills learned in the different subjects. The project work has to be started in the seventh semester and is to be continued in the eighth semester.

Project – 7th Semester:

Students are expected to finalize the project themes/titles with the assistance of an identified faculty member as project guide during first half of the seventh semester. During this the students are required to submit a project plan, relevance of the project proposed, literature survey, objectives, statement of how the objectives are to be tackled, time schedule and cost estimate. Assessment tools used to evaluate project work are:

Mid-term Evaluation: Mid-term evaluation is conducted at the mid of the 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 skills are evaluated by the panel based on their performance.

End term Evaluation: End-term evaluation is conducted at the end of the semester in the form of the presentation. The evaluation 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 –8th Semester:

Mid-term Evaluation: The design part of the proposed work is evaluated. The students' communication skills and depth of knowledge in designing is assessed based on presentation and response to questions asked by the panel comprising of guide, Head of the department and project coordinator. The percentage of work completed, difficulties faced and how the students have 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.

End-Term Evaluation: The end term evaluation includes demonstration and evaluation by the panel of examiners consisting of guide, senior professor, Head of the department and external examiner.

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 the panel: The performance of individual student is evaluated by the panel of examiners. The project report submitted by a project group is evaluated by the panel. The panel of examiners analyzes the nature of the project and apart from the technical merit of the work, makes sure that the work is environment friendly, cost effective, ensures safety and ensures adherence to best ethical practices. The projects are classified into different areas and their relevance to PO's and PSO's are identified to ensure its quality. Viva Voce is a part of assessing students' knowledge in engineering courses.

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

i) Course Outcome attainment levels

Assessment Method	Level	Attainment Levels
Minor	1	50% of students scoring more than 40% marks
	2	60% of students scoring more than 40% marks
	3	75% of students scoring more than 40% marks
Major	1	50% of students scoring more than 40% marks
	2	60% of students scoring more than 40% marks
	3	75% of students scoring more than 40% marks
Continuous Assessment	1	50% of students scoring more than 40% marks
	2	60% of students scoring more than 40% marks
	3	75% of students scoring more than 40% marks

ii) Course Outcome Calculation of a Course:

MEC 504 (Heat Transfer)

Assessment Tool	MEC 504.1	MEC 504.2	MEC 504.3
Minor 1	3	-	3
Minor 2	-	3	3
Major	3	3	3
Continuous Assessment (Assignment)	3	3	3
Continuous Assessment (Quiz)	3	3	3
Continuous Assessment (MCQ Quiz)	2	2	2
Continuous Assessment (Presentation)	2	2	2

Attainment	MEC 504.1	MEC 504.2	MEC 504.3
Minor (Average)	3	3	3
Major	3	3	3
Continuous Assessment (Average)	2.5	2.5	2.5
Overall (Average)	2.95	2.95	2.95
Overall CO	2.8 (Level A)		

Formulae:

$$\text{Overall CO} = \frac{4}{10}(\text{Minor}) + \frac{5}{10}(\text{Major}) + \frac{1}{10}(\text{Continuous Assessment})$$

$$\text{Minor} = 3$$

$$\text{Major} = 3$$

$$\text{Continuous Assessment} = 2.5$$

Substituting in the above formulae:

$$\text{Overall CO} = \frac{4}{10}(3) + \frac{5}{10}(3) + \frac{1}{10}(2.5) = 2.95$$

Minors Weightage: 40 marks

Major Weightage: 50 marks

Continuous assessment: 10 marks

Total marks: 100 marks

Total attainment= 40% Minor+50% Major+10% Continuous assessment

Score	Level
> 2.5	A
1.5-2.5	B
<1.5	C

iii) Course Outcome Attainment of all Courses

Course	C01	C02	C03	C04	C05
MEC 201	A	A	B	-	-
MEC 301	B	A	A	-	-
MEC 302	A	B	A	-	-
MEC 303	A	A	B	-	-
MEC 304	A	A	A	-	-
MEC 305	A	B	A	-	-
MEC 306	A	A	A	-	-
MTH 304	-	-	-	-	-
MEC 302P	A	A	A	-	-
MEC 303P	A	A	A	-	-
MEC 305P	A	A	A	-	-
MEC 401	B	A	A	-	-
MEC 402	A	B	A	-	-
MEC 403	B	A	A	-	-
MEC 404	A	A	A	-	-

MEC 405	A	A	A	-	-
ELE 406	-	-	-	-	-
MEC 403P	A	A	A	-	-
MEC 404P	A	A	A	-	-
MEC 405P	A	A	A	-	-
ELE 407P	-	-	-	-	-
MEC 501	A	B	A	-	-
MEC 502	A	B	B	-	-
MEC 503	A	A	A	-	-
MEC 504	A	B	A	-	-
MEC 505	A	A	A	-	-
ECE 508	-	-	-	-	-
MEC 501P	A	A	A	-	-
MEC 504P	A	A	A	-	-
MEC 505P	A	A	A	-	-
ECE 508P	-	-	-	-	-
MEC 601	A	A	A	-	-
MEC 602	A	A	A	-	-
MEC 603	A	B	A	-	-
MEC 604	A	B	A	-	-
MEC 605	A	A	A	-	-
MEC 606	A	A	A	-	-
MEC 603P	A	A	A	-	-
MEC 605P	A	A	A	-	-
MEC 701	A	A	A	-	-
MEC 702	A	A	A	-	-
MEC 703	A	A	A	-	-
MEC 704	A	A	A	-	-
MEC 705	A	A	A	-	-
MEC 706	A	A	A	-	-
MEC 707	A	A	A	-	-
MEC 703P	A	A	A	-	-
MEC 705P	A	A	A	-	-
MEC 801	A	A	A	-	-
MEC 802	A	A	A	-	-
MEC 803	A	A	A	-	-
MEC 804	A	A	A	-	-

MEC 805	A	A	A	-	-
MEC 802P	A	A	A	-	-

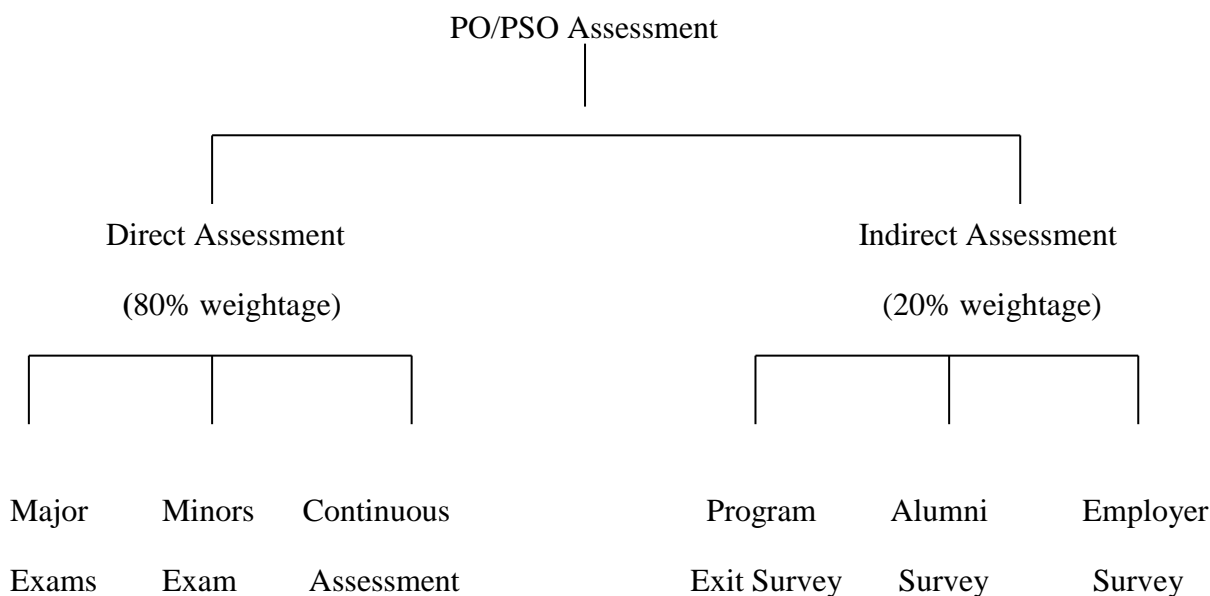
Up to December 2016

3.3 Attainment of Program Outcomes and Program Specific Outcomes

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

(A) List of PO and PSO assessment tools and processes

(i) 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 50% weightage is given to attainment through major exam, 20% weightage is given to attainment through two Minor exams of equal weightage and remaining 10 % internal through continuous assessment. 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%.

(ii) 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

		Course	Assessment Tools	Frequency	
Direct (80% weightage)	CO Assessment	Theory	Minors	Twice/course	
			Continuous Assessment	Weekly	
			Major	Once/course	
		Lab	Continuous Assessment (Report, Experiments)	Daily	
			Major Lab Exam (Viva Voce, perform a given experiment)	Once/lab course	
		Seminar	Presentation	Twice/Course	
			Report	Once/course	
		Project	7 th Semester	Mid-Term Evaluation	Once/course
				End- Term Evaluation	Once/course
			8 th Semester	Mid-Term Evaluation	Once/course
End- Term Evaluation (Demonstration and evaluation by External Examiner)	Once/course				
Indirect (20% weightage)	Surveys	Program Exit Survey		Once in an year	
		Employer Survey		Once in an year	
		Alumni Survey		Once in an year	

(B) 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 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. Figure 1 shows the direct assessment of POs and PSOs of Heat Transfer Systems and Applications (MEC 503) as a sample.

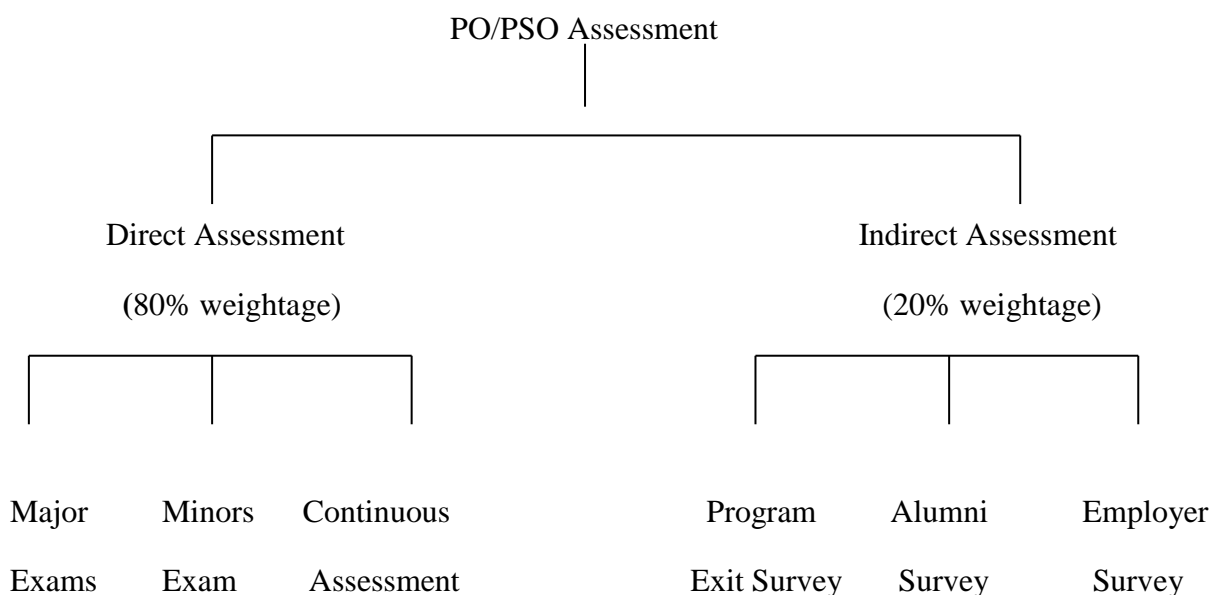
Jan 2017 onwards

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

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

(A) List of PO and PSO assessment tools and processes

(i) 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 major exam, 30% weightage is given to attainment through mid-term exams and remaining 10 % internal through continuous assessment. 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%.

(ii) 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 (b).

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

		Course		Assessment Tools	Frequency	
		Direct (80% weightage)	CO Assessment	Theory		Mid-term
	Continuous Assessment				Weekly	
	Major				Once/course	
Lab				Continuous Assessment (Report, Experiments)	Daily	
				Major Lab Exam (Viva Voce, perform a given experiment)	Once/lab course	
Seminar				Presentation	Twice/Course	
				Report	Once/course	
Project	7 th Semester				Mid-Term Evaluation	Once/course
					End- Term Evaluation	Once/course
	8 th Semester				Mid-Term Evaluation	Once/course
					End- Term Evaluation (Demonstration and evaluation by External Examiner)	Once/course
Indirect (20% weightage)	Surveys			Program Exit Survey		Once in an year
		Employer Survey		Once in an year		
		Alumni Survey		Once in an year		

(B) 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 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. Figure 1 shows the direct assessment of POs and PSOs of Heat Transfer Systems and Applications (MEC 504) as a sample.

(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 is given a weightage of 50%.

National Institute of Technology Srinagar

Department of Mechanical Engineering

Course-PO attainment Sample Calculations

Semester	5th
Year	2016
Session	Autumn

Subject	Heat Transfer
Course code	MEC 504
Faculty Name	Adnan Qayoum

TABLE 1: CO-PO Mapping Matrix

S. No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MEC504.1	3	2	1	2	-	1	1	2	-	-	-	2
MEC504.2	2	2	3	2	-	1	1	2	-	-	-	2
MEC 504.3	3	2	1	3	-	3	1	2	-	-	-	2

TABLE 2: CO-PSO Mapping Matrix

S. No.	PSO1	PSO2	PSO3
MEC 504.1	3	3	2
MEC 504.2	3	3	2

MEC 504.3	3	3	2
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TABLE 3: CO attainment Marks

Assessment Tools	CO1	CO2	CO3
Continuous Assessment (Assignment)	3	2	3
Continuous Assessment (Quiz)	3	2	3
Continuous Assessment (MCQ Quiz)	2	2	2
Continuous Assessment (Presentation)	2	2	2
Continuous Assessment (Average)	2.5	2	2.5
Minor 1	3	2	3
Minor 2	-	2	2
Minor (Average)	3	2.5	2.5
Major	3	2	3

CO Attainment 2.9 2 2.75

CO Attainment (Average) 2.6

TABLE 4: CO-PSO Mapping Matrix

S. No.	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2

MEC 504 (Actual)	3	3	3	3	1	2	2	3	1	1	1	3
MEC 504 (Attained)	2.6	2.6	2.8	2.7	0.8	1.7	1.8	2.7	0.8	0.8	0.8	2.6

Attainment of PO1 is calculated by corresponding the Cos to which PO1 is correlated (from Table 1) and corresponding CO attainment (from Table 3)

Sample Calculations:

$$\text{Attainment of PO1:} = \frac{[(2.9)+(2)+(2.75)]}{3} = \mathbf{2.6}$$

Course Code	PSO1	PSO2	PSO3	
MEC504 (Actual)	3	3	3	◀Course-PSO Correlation (average of Table 2)
MEC504 (Attained)	2.6	2.6	2.6	◀PSO Attainment (Process is described below)

Attainment of PSO1 is calculated by considering the COs to which PSO1 is correlated (from Table 2) and corresponding CO attainment from Table 3

Sample Calculation: attainment of PSO1=

$$\text{Attainment of PSO1:} = \frac{[(2.9)+(2)+(2.75)]}{3} = \mathbf{2.6}$$

(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 is given a weightage of 50%.

(1) 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 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.

S. No.	Your overall satisfaction with the following	Extremely Contended	Contended	Somewhat Contended
1	Fundamental knowledge in mathematics, science, engineering and humanities.			
2	Exhibiting the ability to practice advanced technologies to solve contemporary and new problems.			
3	Utilization of research-based knowledge and research methods.			
4	Capability to recognize, formulate and analyse engineering problems.			
5	Cognizance to try engineering solution in global, national and convivial contexts.			
6	Comprehending professional and ethical responsibility.			
7	Comprehending professional engineering in convivial and environmental contexts.			
8	Design/development of complex engineering problems and their solutions.			
9	Exhibiting the ability to select and try suitable resource management techniques.			
10	Capability to function as a productive comrade in multi-disciplinary team.			
11	Able of self-education and lucid perception of the value of updating their professional knowledge to evolve in lifelong learning.			
12	Expertise in English language in both communicative and technical forms.			
13	Program enhances creative and imaginative skills requisite in mechanical engineering domain.			
14	Program helps progress through advanced degree or certificate programs.			
15	Problems helps in securing jobs in the field of design, research, manufacturing, safety, quality, sales and services.			

16	Program should inculcate in them to take lead in innovation and entrepreneurship activities in order to prove themselves beneficial to society at large.			
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(b) Relation of POs and PSOs with questionnaire:

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

PSOs	PSO1	PSO2	PSO3
Questions	Q13 & Q 14	Q15	Q16

(c) Evaluation Process

The questionnaire consists of 16 questions which is relevant for assessing each PO and PSO. The first 12 questions correspond to the 12 POs and the remaining 3 questions are for PSOs (Questions 13 & 14 are used to evaluate PSO 1 and Question 15 is used to evaluate PSO 2 and Question 16 is used to evaluate PSO3). Each question is having 3 options, namely, extremely contented, contented and somewhat contented, 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.

(2) 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 relation of POs & PSOs with each question is given in section (b).

(a) Questionnaire Format

Rate the NIT graduates working in your organization using the following criterion. Put a tick mark

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

S. No.	Your overall satisfaction with the following	Extremely Contended	Contended	Somewhat Contended
1	Scope for advancement and analysis of engineering issues & problems, formulation of relevant and well suited solutions, preserving professional and ethical values			
2	Knack for self-study, potential to learn new craft and skills, recognition for the value of continuing & persistent learning to refurbish professional knowledge			
3	Comprehend professional engineering solutions clarifications for liveable advancement and their use in global, national and societal background.			
4	Enhance knowledge and gain new skills and implement these in research and development			
5	Fundamental knowledge in mathematics and science and professional fluency in English both communicative and technical forms			
6	Skilfulness in differentiation of management techniques and be possessed with leadership skills that enable flourishing function of multi-disciplinary teams			

(b) Relation of POs and PSOs with questionnaire:

POs	PO1	PO2	PO3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
Questions	Q5	Q1	Q1	Q4	Q2 & Q4	Q3	Q3	Q1	Q6	Q5	Q6	Q2

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

(c) 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. Similar procedure is followed for PSOs also. Each question is having 3 options namely, extremely contented,

contented and somewhat contented, 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.

(3) 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 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.

S. No	Overall, are you contented with	Extremely Contented	Contented	Somewhat Contented
1	Fundamental knowledge in mathematics, science, engineering and humanities.			
2	Exhibiting the ability to practice advanced technologies to solve contemporary and new problems.			
3	Utilization of research-based knowledge and research methods.			
4	Capability to recognize, formulate and analyse engineering problems.			
5	Cognizance to try engineering solution in global, national and convivial contexts.			
6	Comprehending professional and ethical responsibility.			
7	Comprehending professional engineering in convivial and environmental contexts.			
8	Design/development of complex engineering problems and their solutions.			

9	Exhibiting the ability to select and try suitable resource management techniques.			
10	Capability to function as a productive comrade in multi-disciplinary team.			
11	Able of self-education and lucid perception of the value of updating their professional knowledge to evolve in lifelong learning.			
12	Expertise in English language in both communicative and technical forms.			
13	Program enhances creative and imaginative skills requisite in mechanical engineering domain.			
14	Program helps progress through advanced degree or certificate programs.			
15	Program helps in securing jobs in the field of design, research, manufacturing, safety, quality, sales and services.			
16	Program should inculcate in them to take lead in innovation and entrepreneurship activities in order to prove themselves beneficial to society at large.			

(a) Relation of POs and PSOs with questionnaire

POs	PO1	PO2	PO3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
Questions	Q1	Q5	Q4	Q2	Q7	Q8	Q6	Q3	Q11	Q9	Q12	Q10

PSOs	PSOs1	PSOs2	PSOs3
Questions	Q14 & Q15	Q13	Q16

(b) Evaluation Process

(c) The questionnaire consists of 16 questions which are relevant for assessing each POs and PSOs. The first 12 questions are used to evaluate POs and the remaining 4 questions are for evaluating PSOs (Question 14 and 15 are used to evaluate PSO 1, question 13 for PSO 2 and question 16 for PSO 3). Each question is having 3 options, namely, extremely

contended, contended and somewhat contended, which is given 3, 2 and 1 mark respectively. These marks are tabulated and the average values corresponding to each PO and PSO are determined.

3.3.2. Provide results of evaluation of each PO & PSO

(65)

3.3.2 (a) PO Attainment

Table 3.3.2 (a) PO Attainment of all courses

Semester	Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
S2	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
S3	MEC 301	2.7	1.6	1.7	1.7	0.7	0.8	1.8	2.6	0.8	0.8	0.8	2.7
	MEC 302	2.6	1.7	1.7	1.6	0.8	0.8	1.8	2.7	0.7	0.8	0.8	2.6
	MEC 303	2.8	2.8	2.8	2.6	1.6	2.6	1.7	2.6	0.8	0.7	0.8	2.8
	MEC 304	2.9	2.7	2.5	2.7	1.8	2.6	2.8	2.7	0.7	0.7	0.8	2.9
	MEC 305	2.8	1.7	1.7	1.8	0.7	0.8	1.7	2.8	0.7	0.8	0.8	2.8
	MEC 306	2.6	2.6	2.8	2.6	1.8	2.6	2.7	2.7	0.8	0.7	0.8	2.6
	MTH 304	2.5	2.5	2.7	2.6	1.8	2.6	2.8	2.6	0.8	0.8	0.8	2.5
	MEC 302P	2.4	2.6	2.8	2.7	1.7	2.6	2.9	2.5	0.7	0.8	0.8	2.4
	MEC 303P	2.6	1.8	1.8	1.8	0.8	0.7	1.7	2.6	0.7	0.8	0.8	2.6
	MEC 305P	2.9	2.6	2.7	2.7	1.7	2.6	2.8	2.6	0.6	0.8	0.8	2.9
	S4	MEC 401	2.8	1.9	1.7	0.8	0.6	0.8	1.8	1.8	0.8	0.7	0.8
MEC 402		2.7	1.7	1.8	0.7	0.7	1.8	1.7	1.7	0.8	0.7	0.8	2.7
MEC 403		2.6	2.7	2.7	2.6	1.7	2.7	1.7	2.7	1.7	1.7	1.8	2.6
MEC 404		2.8	1.8	1.7	0.7	0.8	1.8	1.7	1.8	0.8	0.8	0.8	2.8
MEC 405		2.6	1.8	1.7	1.6	0.8	0.8	1.7	2.6	0.8	0.8	0.8	2.6
ELE 406		2.5	2.8	2.6	2.7	1.7	2.8	2.8	2.5	0.8	0.8	0.8	2.5
MEC		2.4	2.7	2.7	2.8	1.8	2.7	2.7	2.6	0.7	0.8	0.7	2.4

	403P												
	MEC 404P	2.6	1.8	1.7	1.7	0.7	0.8	1.7	2.5	0.8	0.8	0.8	2.6
	MEC 405P	2.9	2.8	2.7	2.7	1.8	2.8	2.7	2.6	0.8	0.8	0.8	2.9
	ELE 407P	2.5	1.8	1.8	0.7	0.8	1.7	1.7	1.8	0.8	0.7	0.8	2.5
S5	MEC 501	2.6	1.7	1.7	0.8	0.7	1.8	1.8	1.7	0.7	0.8	0.8	2.6
	MEC 502	2.5	2.7	1.7	1.6	0.8	1.8	0.8	2.7	1.7	1.8	1.6	2.5
	MEC 503	2.4	2.7	2.7	2.6	0.7	1.6	1.8	2.6	0.8	0.8	0.8	2.4
	MEC 504	2.6	2.6	2.8	2.7	0.8	1.7	1.8	2.7	0.8	0.8	0.8	2.6
	MEC 505	2.9	2.7	1.6	1.8	0.7	1.8	0.8	2.6	1.5	1.8	1.7	2.9
	ECE 508	2.7	2.8	2.7	2.7	0.8	1.7	1.8	2.5	0.7	0.7	0.8	2.7
	MEC 501P	2.6	2.5	2.6	2.6	0.9	1.8	1.8	2.5	0.8	0.7	0.8	2.6
	MEC 504P	2.8	1.6	2.6	2.8	0.7	1.9	1.7	2.6	0.7	0.7	0.8	2.8
	MEC 505P	2.6	2.5	1.7	1.8	0.7	1.8	1.5	2.7	1.8	1.8	1.7	2.6
	ECE 508P	2.5	2.4	1.8	1.7	0.8	1.8	0.8	2.6	1.6	1.8	1.8	2.5
S6	MEC 601	2.4	2.6	2.8	2.7	0.8	1.6	1.7	2.7	0.8	0.8	0.8	2.4
	MEC 602	2.6	2.9	1.6	1.6	0.8	1.6	0.7	2.8	1.6	1.7	1.8	2.6
	MEC 603	2.9	2.7	1.8	1.7	0.8	1.6	0.8	2.7	1.8	1.8	1.8	2.9
	MEC 604	2.5	2.6	1.8	1.8	2.6	1.5	2.8	1.7	2.8	2.6	2.7	2.5
	MEC 605	2.6	2.8	1.7	1.6	2.7	1.6	2.7	1.6	2.6	2.7	2.8	2.6
	MEC 606	2.5	1.8	0.7	1.7	1.8	1.6	1.8	1.8	0.8	2.8	1.7	2.5
	MEC 603P	2.4	2.7	2.7	2.6	2.8	2.6	2.7	2.7	1.8	1.8	2.6	2.4
	MEC 605P	2.6	1.8	0.7	1.6	1.8	1.8	1.8	1.7	0.7	2.6	1.8	2.6
S7	MEC 701	2.8	2.6	2.7	2.6	2.8	2.7	2.7	2.7	1.8	1.8	2.5	2.8
	MEC 702	2.6	2.7	1.8	1.8	0.7	1.8	2.8	2.7	2.7	2.7	2.6	2.6
	MEC 703	2.5	2.8	2.7	2.6	2.8	2.7	2.7	2.8	1.8	1.8	2.6	2.5

	MEC 704	2.4	2.6	2.5	1.7	0.8	1.8	2.6	2.7	2.8	2.8	2.4	2.4
	MEC 705	2.6	2.7	2.6	2.7	2.8	2.8	2.7	2.7	1.8	1.8	2.5	2.6
	MEC 706	2.9	2.7	2.7	1.7	0.8	1.8	2.6	2.8	2.7	2.8	2.6	2.9
	MEC 707	2.6	2.7	2.4	2.7	2.8	2.8	2.5	2.8	1.8	1.8	2.7	2.6
	MEC 703P	2.5	2.8	2.3	1.8	0.8	1.8	2.4	2.7	2.7	2.7	2.7	2.5
	MEC 705P	2.4	2.7	2.7	1.7	0.8	1.8	2.5	2.6	2.8	2.8	2.8	2.4
S8	MEC 801	2.6	2.6	2.6	2.7	2.6	2.8	2.6	1.8	2.8	1.8	2.6	2.6
	MEC 802	2.5	2.7	2.7	2.6	2.6	2.8	2.7	1.8	2.7	1.6	2.5	2.5
	MEC 803	2.4	2.8	1.8	1.8	0.8	1.8	2.8	2.9	2.8	2.7	2.4	2.4
	MEC 804	2.7	2.8	1.7	1.6	0.9	1.7	2.6	2.7	2.7	2.6	2.5	2.7
	MEC 805	2.6	2.8	1.6	1.7	0.8	1.8	2.5	2.6	2.6	2.5	2.4	2.6
	MEC 802P	2.8	2.8	2.7	2.7	2.8	2.7	2.5	1.8	2.7	1.8	2.6	2.8
Direct Attainment		2.62	2.41	2.15	2.03	1.35	1.91	2.08	2.44	1.45	1.47	1.55	2.74
Indirect Attainment		2.8	2.6	2.5	2.4	2	2.2	2.5	2.7	2	2.1	2.2	2.9
Direct Attainment (80% weightage)		2.10	1.93	1.72	1.62	1.08	1.53	1.67	1.95	1.16	1.18	1.24	2.19
Indirect Attainment (20% percentage)		0.56	0.52	0.5	0.48	0.4	0.44	0.5	0.54	0.4	0.42	0.44	0.58
Final Attainment		2.66	2.45	2.22	2.10	1.48	1.97	2.17	2.49	1.56	1.60	1.68	2.77

3.3.2 (b) PSO Attainment

Table 3.3.2 (b) PSO Attainment of all courses

Semester	Course	PSO1	PSO2	PSO3
S2	MEC 201	2.6	0.8	0.7
S3	MEC 301	2.6	1.8	1.8
	MEC 302	2.6	1.7	1.8
	MEC 303	2.6	2.7	2.6
	MEC 304	2.6	2.6	2.7
	MEC 305	2.6	1.8	2.7

	MEC 306	2.6	2.7	2.6
	MTH 304	2.6	2.6	2.6
	MEC 302P	2.6	2.5	2.6
	MEC 303P	2.6	1.9	1.8
	MEC 305P	2.6	2.7	2.6
S4	MEC 401	2.6	2.6	1.8
	MEC 402	2.6	1.8	1.8
	MEC 403	2.6	2.6	2.6
	MEC 404	2.6	1.8	1.8
	MEC 405	2.6	1.7	1.7
	ELE 406	2.6	2.7	2.6
	MEC 403P	2.6	2.6	2.7
	MEC 404P	2.6	1.8	1.8
	MEC 405P	2.6	2.7	2.6
	ELE 407P	2.6	1.8	1.8
S5	MEC 501	2.6	1.8	1.9
	MEC 502	2.6	2.6	1.9
	MEC 503	2.6	2.6	2.7
	MEC 504	2.6	2.7	2.6
	MEC 505	2.6	2.6	1.8
	ECE 508	2.6	2.7	2.6
	MEC 501P	2.6	2.8	2.7
	MEC 504P	2.6	2.6	2.8
	MEC 505P	2.6	2.6	2.8
	ECE 508P	2.6	2.5	2.8
S6	MEC 601	2.6	2.8	2.8
	MEC 602	2.6	2.7	2.8
	MEC 603	2.6	2.7	2.8
	MEC 604	2.6	2.8	1.8
	MEC 605	2.6	2.6	1.8
	MEC 606	2.6	2.7	0.8
	MEC 603P	2.6	2.7	2.6

	MEC 605P	2.6	1.7	0.8
S7	MEC 701	2.6	2.7	2.6
	MEC 702	2.6	2.8	1.8
	MEC 703	2.6	2.7	2.7
	MEC 704	2.6	2.6	1.8
	MEC 705	2.6	2.8	2.8
	MEC 706	2.6	2.8	1.7
	MEC 707	2.6	2.7	2.6
	MEC 703P	2.6	2.8	1.8
	MEC 705P	2.6	2.7	1.8
	S8	MEC 801	2.6	2.6
MEC 802		2.6	2.7	2.7
MEC 803		2.6	2.7	1.9
MEC 804		2.6	2.8	1.8
MEC 805		2.6	2.6	1.9
MEC 802P		2.6	1.8	2.8
Direct Attainment		2.60	2.44	2.22
Indirect Attainment		2.8	2.6	2.6
Direct Attainment (80% weightage)		2.08	1.95	1.78
Indirect Attainment (20% weightage)		0.56	0.52	0.52
Final Attainment		2.64	2.47	2.30

CRITERION 4	Student's Performance	100
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Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY (2017-18)	CAYm1 (2016-17)	CAYm2 (2015-16)
Sanctioned intake strength in the program (<i>N</i>)	77	77	77
Total number of admitted students in first year minus number of students migrated to other programmes at the end of 1st year (<i>N1</i>)	73	56	76
Number of admitted students in 2nd year in the same batch via lateral entry (<i>N2</i>)	NIL	NIL	NIL
Separate division students, if applicable (<i>N3</i>)	0	0	0
Total number of admitted students in the programme $N = (N1 + N2 + N3)$	73	56	76

Table B.4a

CAY – Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

LYG – Last Year Graduate

LYGm1 – Last Year Graduate minus 1

LYGm2 – Last Year Graduate minus 2

Year of entry (in reverse chronological order)	$N1 + N2 + N3$ (As defined above)	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
2017-18	73	-	0	0	0
2016-17	56	49	0	0	0

2015-16	76	70	65	0	0
2014-15	77	68	61	59	0
2013-14	68	62	59	60	68
2012-13	74	68	64	65	74
2011-12	74	74	72	72	74

Table B.4b

Year of entry (in reverse chronological order)	N1 + N2+N3 (As defined above)	Number of students who have successfully graduated (Students with backlog in stipulated period of study)			
		I Year	II Year	III Year	IV Year
2017-18	73		0	0	0
2016-17	56	7	0	0	0
2015-16	76	6	15	0	0
2014-15	77	9	16	20	0
2013-14	68	6	11	14	0
2012-13	74	6	11	15	0
2011-12	74	0	2	2	0

Table B.4c

4.1 Enrolment ratio (20)

Enrolment ratio = $N1/N$

Item (Students enrolled at the First Year Level on average basis during the last three years starting from current academic year) ()	Marks
$\geq 80\%$ students enrolled (88.74)	18

Table B.4.1

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 = (Number of students who have graduated from the program without backlog)/
(Number of students admitted in the first year of that batch and admitted in 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/year of study = $15 \times$ Average SI

Item	LYG (2017) (CAYm4)	LYGm1 (2016) (CAYm5)	LYGm2 (2015) (CAYm6)
Number of students admitted in the corresponding first year+ admitted via lateral entry in 2nd year	68	74	74
Number of students who have graduated without backlogs in the stipulated period	59	64	72
Success index (SI)	0.8382	0.8513	0.9729
Average success index	0.8874		
Success rate	13.31		

Table B.4.2.1

4.2.2. Success rate with backlog in stipulated period of study (5)

SI = (Number of students who have graduated from the program in the stipulated period of course duration)/ (Number of students admitted in the first year of that batch and admitted in 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/year of study = $5 \times$ Average SI

Item	LYG (2017) (CAYm4)	LYGm1 (2016) (CAYm5)	LYGm2 (2015) (CAYm6)
Number of students admitted in the corresponding first year+ admitted via lateral entry in 2nd year	68	74	74
Number of students who have graduated with backlogs in the stipulated period	68	74	74
Success index (SI)	1	1	1
Average Success index	1.0		
Success rate	5		

Table B.4.2.2

4.3 Academic Performance in Second year: (10)

Academic Performance = Average API (Academic Performance Index),

where

$API = ((\text{Mean of 2nd Year Grade Point Average of all successful Students on a 10-point scale})$ or

$(\text{Mean of the percentage of marks of all successful students in Second Year}/10)) \times$

$(\text{number of}$

$\text{successful students}/\text{number of students appeared in the examination})$

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

Academic Performance	CAYm1 2017	CAYm2 2016	CAYm3 2015
Mean of CGPA or Mean Percentage of all successful students (X)	7.6146	7.7284	7.528
Total no. of successful students (Y)	66	72	73
Total no. of students appeared in the examination (Z)	68	74	74
$API = X * (Y/Z)$ AP1 AP2 AP3	7.39064	7.5195	7.426
Average API = $(AP1 + AP2 + AP3)/3$	7.4454		

Table B.4.3

4.4 Placement, Higher Studies and Entrepreneurship

(30)

Assessment Points = $30 \times$ average placement

Item	CAYm1 2017	CAYm2 2016	CAYm3 2015
Total No. of Final Year Students (N)	68	73	70
No. of students placed in companies or Government Sector (x)	37	64	35
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	29	8	34
No. of students turned entrepreneur in engineering/technology (z)	0	0	0
$x + y + z =$	66	72	69
Placement Index: $(x + y + z)/N$	(0.97058) P1	(0.9863) P2	(0.9857) P3
Average placement = $(P1 + P2 + P3)/3$	0.9859		
Assessment Points = $30 \times$ average placement	29.577		

Table B.4.4

4.5 Professional Activities (20)**4.5.1 Professional societies / chapters and organizing engineering events (5)**

(Instruction: The institution may provide data for past three years).

2017-2018

1. Rally car design challenge 2018
 - a. A national level racing event in which a team of students is required to design and fabricate a two-seater off road vehicle (or all-terrain vehicle)

2016-17

1. 'TechVeganza' spring 2015
2. 'Robomagellan' a robotic competition 2015
 - a. A national level racing event in which a team of students is required to design and fabricate a two-seater off road vehicle (or all-terrain vehicle)

2015-16

1. Robo-thon

4.5.2 Publication of technical magazines, newsletters, etc. (5)

4.5.3 Institute Marks : 0.00

1. NIT Srinagar annual college magazine (2017, 2016, 2015)

4.5.3 Participation in inter-institute events by students of the program of study (10)**2017-2018**

1. E-summit (organized by IIT Bombay)
 - a. Students from the department participated in the event

2016-17

1. E-Yatra robotic competition (organized by IIT Bombay)
 - b. Students from the department participated in the event
2. Boeing National Aerodynamic Club
 - a. Students from the department participated in the event

2015-16

1. IIT Bombay-Reformation (tech event)
 - a. Students from the department participated in the event.

CRITERION 5	Faculty Information and Contributions	200
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Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/ Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving (In case Currently Associated is ("No"))	Nature of Association (Regular/Contract)
	Degree (highest degree)	University	Year of attaining higher qualification							Research Paper Publications	Ph.D. Guidance	Faculty Receiving Ph.D. during the Assessment Years		
M.F.Wani	Ph.D. (Mechanical engineering)	I.I.T. Delhi	02-06-1999	Faculty	Professor	29-12-2007	15-08-1985	Mechanical Engg. Deptt.	Tribology, Nano Tribology, Life Cycle Engineering	45	11		Y	Regular
Prof.(Dr.) Rakesh Sehgal	PDF, Ph.D. (Mechanical engineering)	Kurukshetra university	14-11-2001	Faculty	Professor & Director	25-07-2003	09-11-2017	Mechanical Engg. Deptt.	Developing Tribo-concepts Design Methodology for Improved Reliability and Maintenance of Mechanical Systems	∞	∞		Y	Regular

Prof.(Dr.) Babar Ahmad	Prof. (Dr.) M. Marouf Wani	Prof.(Dr.) N. A. Sheikh	Prof.(Dr.) G.A. Harmain
Ph.D. (Mechanical engineering)	PDF, Ph.D. (Mechanical engineering)	Ph.D. (Mechanical engineering)	Ph.D. (Mechanical engineering)
I.I.Sc, Bangalore 19-06-2012	I.I.T, Delhi 13-08-2005	I.I.T. Kanpur 27-03-2004	University of Victoria, Canada 28-05-1997
Faculty	Faculty	Faculty	Faculty
Professor	Professor	Professor & H.O.D.	Professor
13-09-2013	13-09-2013	13-09-2013	01-07-2008
01-03-1994	19-03-1987	10-04-1987	19-03-1987
Mechanical Engg. Deptt.	Engg. Deptt.	Mechanical Engg. Deptt.	Mechanical Engg. Deptt.
MEMS, Ultrasonic transducers, NDT&E	Combustion Engines, Combustion of Alternative fuels, Emission	Aircraft wing vibration, Smart Structures, Finite elements.	Computational Mechanics, FEM, Thermo elasticity and Second Sound Fracture Mechanics and Material Fatigue
	14	20	28
6	6	9	12
Y	Y	Y	Y
Regular	Regular	Regular	Regular

Mr. Sheikh Ghulam Mohammad		Dr. Sheikh Shahid Saleem		Dr. Saad Parvez		FtOl. (Dr.) Adnan Qayoum	
M.Tech., Registered for Ph.D. at NIT-Srinagar	Ph.D. (Mechanical engineering)	Ph.D. (Industrial engineering)	Ph.D. (Mechanical engineering)	Ph.D. (Industrial engineering)	Ph.D. (Mechanical engineering)	I.I.T., Kanpur	
M.Tech., I.I.T, Delhi	N.I.T., Srinagar	NIT Srinagar	N.I.T., Srinagar	NIT Srinagar	I.I.T., Kanpur		
31-12-2001	04-06-2018	13-07-2018	04-06-2018	13-07-2018	27-08-2012		
Faculty	Faculty	Faculty	Faculty	Faculty	Faculty		
Associate Professor	Associate Professor	Associate Professor	Associate Professor	Associate Professor	Professor		
10-07-2011	01-07-2011	01-07-2011	01-07-2011	01-07-2011	13-09-2013		
08-03-1996	01-04-1996	16-01-1996	01-04-1996	16-01-1996	27-12-1993		
Mechanical Engg. Deptt.	Mechanical Engg. Deptt.	Mechanical Engg. Deptt.	Mechanical Engg. Deptt.	Mechanical Engg. Deptt.	Mechanical Engg. Deptt.		
Manufacturing Systems, Rapid Prototyping, NDT	Tribology, Biomaterials	Industrial engineering, Project management, Quality control, Decision making			Experimental Fluid Mechanics, Heat Transfer Augmentation, Design of Thermal Systems		
'	'	'	'	'	'		
Y	Y	Y	Y	Y	Y		
Regular	Regular	Regular	Regular	Regular	Regular		

Dr. Anjana kak	Ph.D. (Mechanical engineering)	I.I.T, Delhi	27-04-2001	Faculty	Dr. Mohammad Hanief	Ph.D. (Mechanical engineering)	N.I.T. Srinagar	28-09-2016	Faculty	Assistant Professor	-	12-03-2000	Mechanical Engg. Deptt.	Wear modeling, Materials, Tribology	4	4	Y	Regular	
Mr. Ved Prakash Sharma	B.Tech., Registered for Ph.D. at IIT-Delhi	Registered for Ph.D., IIT Delhi (2016-continued)	15-07-2014	Faculty	Dr. M. S. Charoo	Ph.D. (Mechanical engineering)	N.I.T, Srinagar	12-08-2016	Faculty	Assistant Professor	-	24-03-2000	Mechanical Engg. Deptt.	Nano lubrication, Materials, Tribology	14	5	Y	Regular	
Dr. Anjana kak	Ph.D. (Mechanical engineering)	I.I.T, Delhi	27-04-2001	Faculty	Dr. M. Mursaleen	Ph.D. (Mechanical engineering)	N.I.T. Srinagar	21-05-2018	Faculty	Assistant Professor	-	23-03-2000	Mechanical Engg. Deptt.	Smart Structures, Mathematica modeling	9	2	Y	Regular	
Dr. Anjana kak	Ph.D. (Mechanical engineering)	I.I.T, Delhi	27-04-2001	Associate Professor	Mr. Ved Prakash Sharma	B.Tech., Registered for Ph.D. at IIT-Delhi	Registered for Ph.D., IIT Delhi (2016-continued)	15-07-2014	Faculty	Assistant Professor	-	11-01-2016	Mechanical Engg. Deptt.	Fracture mechanics, Microelectronic Packaging.	'	'	Y	Regular	
Dr. Anjana kak	Ph.D. (Mechanical engineering)	I.I.T, Delhi	27-04-2001	Associate Professor	Dr. Anjana kak	Ph.D. (Mechanical engineering)	I.I.T, Delhi	27-04-2001	Associate Professor	Dr. Anjana kak	Ph.D. (Mechanical engineering)	I.I.T, Delhi	27-04-2001	Associate Professor	Project Management, Quality control	'	'	Y	Regular

Dr. Sajad Hussain din	Ph.D. (Mechanical Engineering)	N.I.T., Srinagar	21-10-2017	Faculty	Assistant Professor	-	05-03-2018	Mechanical Engg. Deptt.	Smart structures, Mathematic al Modelling	∅	'		Y	Contract
Mr. Mohsin John	M.Tech. (Mechanical Engineering)	N.I.T., Krukshehra	08-10-2014	Faculty	Assistant Professor	-	18-03-2015	Mechanical Engg. Deptt.	Production engineering	'	'		N 08-09-2017	Contract
Ms. Bisma Ali	M.Tech. (Mechanical Engineering)	N.I.T., Srinagar	02-07-2014	Faculty	Assistant Professor	-	11-03-2015	Mechanical Engg. Deptt.	Industrial tribology and Maintenance management	'	'		N 28-03-2017	Contract
Ms. Afreen nissar	M.Tech. (Mechanical Engineering)	N.I.T., Srinagar	10-06-2015	Faculty	Assistant Professor	-	01-08-2015	Mechanical Engg. Deptt.	Industrial tribology and Maintenance management	'	'		N 01-03-2017	Contract
Mr. Himanshu Gupta	M.Tech. (Mechanical Engineering)	IIT, Dhanbad	15-06-2017	Faculty	Assistant Professor	-	01-04-2013	Mechanical Engg. Deptt.	Tribology	'	'		Y	Contract

Mr. Milan Chandrana	M.Tech. (Mechanical Engineering)	N.I.T., Srinagar	15-01-2017	Faculty	Assistant Professor	-	15-03-2017	Mechanical Engg. Deptt.	MSD	'	'		N	01-03-2018	Contract
Mr. Rohan Ashraf	M.Tech. (Mechanical Engineering)	N.I.T., Srinagar	06-08-2015	Faculty	Assistant Professor	-	15-03-2017	Mechanical Engg. Deptt.	Industrial engineering	'	'		N	01-03-2018	Contract
Mr. Chandra kant	M.Tech. (Mechanical Engineering)	N.I.T., Srinagar	11-07-2016	Faculty	Assistant Professor	-	15-03-2017	Mechanical Engg. Deptt.	MSD	'	'		N	13-09-2017	Contract
Ms. Uzma Ashraf	M.Tech. (Mechanical Engineering)	N.I.T., Srinagar	25-06-2012	Faculty	Assistant Professor	-	21-04-2017	Mechanical Engg. Deptt.	MSD	'	'		N	01-03-2018	Contract
Dr. kaleem ahmad	Ph.D. (Mechanical Engineering)	N.I.T., Srinagar	16-12-2017	Faculty	Assistant Professor	-	05-03-2018	Mechanical Engg. Deptt.	Smart structures, Mathematical Modelling	∞	'		Y		Contract

Dr. Narender panwar	Ph.D. (Mechanical Engineering)	Punjab University	15-06-2018	Faculty	Assistant Professor	-	05-03-2018	Mechanical Engg. Deptt.	Production and industrial	15			Y	Contract
Dr. shuhaib Mushtaq	Ph.D. (Mechanical Engineering)	N.I.T srinagar	27-06-2018	Faculty	Assistant Professor	-	08-08-2018	Mechanical Engg. Deptt.	Tribology, Design	08	-	-	Y	Contract

5.1 Student-Faculty Ratio (SFR) (20)

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

No. of PG programs in the department (m) = 2

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

$$UG = u1+u2+u3$$

$$PG 1= p1+p2$$

$$PG 2= p1+p2$$

$$S = UG + PG$$

$$SFR = S / F$$

	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	25	25	25
PG1	51	51	51
p1	26	26	26
p2	25	25	25
PG2	51	51	51
S	333	333	333
F	16	17	18
SFR	20.81	19.59	18.50
Average SFR	19.63		
Assessment	14		

5.2 Faculty Cadre Proportion (20)

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

	No. of Students (S)	No. of Faculty Required (RF)
2017-18	333	22
2016-17	333	22
2015-16	333	22

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	2.4	7	4.8	4	14	10
2016-17	2.4	7	4.8	4	14	10
2015-16	2.4	7	4.8	4	14	11
Average	2.4	7	4.8	4	14	11

<p>Cadre Ratio Marks</p> $\left(\left(\frac{AF1}{RF1} \right) + \left(\frac{AF2}{RF2} \right) \times 0.6 + \left(\frac{AF3}{RF3} \right) \times 0.4 \right) \times 10$ $(2.91 + 0.49 + 0.31) \times 10 = 37.1$	Assessment 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	13	1	22	12.18
2016-17	10	4	22	10.54
2015-16	10	4	22	10.54
Average Assessment				11.08

5.4 Faculty Retention (10)

No. of faculty members retained in 2017-18 = 16

No. of faculty members retained in 2016-17 = 17

No. of faculty members retained in 2015-16 = 18

No. of required faculty (RF) = 22

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)

Name of Faculty	Qualification	Area of Specialization/ Research Area
Prof. Rakesh Sehgal	PDF, Ph.D. (Mechanical engineering)	Developing Tribo-concepts Design Methodology for Improved Reliability and Maintenance of Mechanical Systems
Prof. M. F. Wani	Ph.D. (Mechanical engineering)	Tribology, Tribology of advanced ceramics & Nano Ceramics, Life Cycle Engineering
Prof. G.A. Harmain	Ph.D. (Mechanical engineering)	Computational Mechanics, FEM, Thermo- elasticity and Second Sound Fracture Mechanics and Material Fatigue
Prof. N. A. Sheikh	Ph.D. (Mechanical engineering)	Aircraft wing vibration, Smart Structures, Finite elements.
Prof. M. M. Wani	PDF, Ph.D. (Mechanical engineering)	Internal Combustion Engines, Combustion of Alternative fuels, Emission control.
Prof. Babar Ahmad	Ph.D. (Mechanical engineering)	Micro Electro Mechanical Systems (MEMS), Dynamics and Control Systems
Prof. Adnan Qayoum	Ph.D. (Mechanical engineering)	Experimental Fluid Mechanics, Heat Transfer Augmentation, Design of Thermal Systems
Dr. Ab. Hamid Bhat	Ph.D. (Electronics & Communication)	Power Electronics

	engineering)	
Dr. Abdul Liman	Ph.D. (Mathematics)	Complex Function Theory
Mr.Saad Parvez	M.Tech.,	Manufacturing strategy, Project management, Quality control
Mr. Sheikh Shahid Saleem	M.Tech.,	Tribology of Super alloys
Mr. Sheikh Ghulam Mohammad	M.Tech., Registered for Ph.D. at NIT-Srinagar	Manufacturing Systems, Rapid Prototyping ,NDT
Dr. Mohammad Hanief	Ph.D. (Mechanical engineering)	Wear modeling, Materials, Tribology
Dr. M. S. Charoo	Ph.D. (Mechanical engineering)	Nano lubrication, Materials, Tribology
Mr. M. Mursaleen	M.Tech., Registered for Ph.D. at NIT-Srinagar	Smart Structures, Mathematical modeling
Mr. Ved Prakash Sharma	B.Tech., Registered for Ph.D. at IIT-Delhi	Microelectronic Packaging, Mechanical Engineering
Miss Tahoor Ayoub	M.Tech. (Mechanical Engineering)	Mechanical system Design
Mr. Adarsh Bhat	M.Tech. (Mechanical Engineering)	Industrial tribology and Maintenance management
Mr. Yunis Ahmad Dar	M.Tech. (Mechanical Engineering)	Production Engineering, Welding Engineering.
Assessment		10

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

Instructional materials

Each classroom is equipped with overhead projectors and some are equipped with the state-of-the-art smart boards. Textbooks, reference books, and study notes prepared by teachers are used for instruction. Other instruction tools are whiteboard, charts and diagrams and laboratory demonstration models.

Working models/charts/monograms:

Apart from the test rigs and experimental set-ups, the labs of the mechanical engineering department are equipped with different cut-section and demonstration models (I C Engine Lab, Dynamics lab etc.,) and working models for the effective teaching-learning process.

Assessment	10
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5.7 Faculty as Participants in Faculty development/ training activities (15)

RF: Faculty required as calculated in 5.2

Name of the Faculty	Marks		
	2017-18	2016-17	2015-16
Prof. Rakesh Sehgal			
Prof. N.A. Sheikh	5	5	5
Prof. M.F.Wani			
Prof. G.A. Harmain	3		5
Prof. M.Marouf Wani			
Prof. Adnan Qayoum	5	5	
Prof. Babar Ahmad			
Mr. Shahid Saleem	5	5	5
Mr.Saad Parvez	5		
Mr. S. Ghulam Mohammad		5	5
Dr. M. S. Charoo			5
Dr. M. Hanief			5
Mr. M. Mursaleen	5		
Mr Ved Prakash			
Sum	28	20	30
RF	22	22	22
Assessment = (3 x Sum/0.5 RF) (Marks limited to 15)	7.63	5.45	8.18
Average Assessment	7.08		

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.

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

Name of the Faculty	2017-18		2016-17		2015-16	
	Pub	PhD	Pub	PhD	Pub	PhD
Prof.(Dr.)Rakesh Sehgal		1- Awarded	04	2-Awarded	04	
Prof. (Dr.) M.F.Wani	26	4-Awarded	10		3	2-Awarded
		5-In progress		8-In progress		8-In progress
Prof.(Dr.) G.A. Harmain	15	2-Awarded	6		7	
		10-In progress		8-In progress		8-In progress
Prof. (Dr.)N.A.Sheikh	10		6	2-Awarded	4	
		7-In progress		4-In progress		4-In progress
Prof. (Dr.) M. Marouf Wani	8		4		2	
		6-In progress		2-In progress		2-In progress
Prof.(Dr.) Babar Ahmad						
		2-In progress		3-In progress		1-In progress
Prof. (Dr.) Adnan Qayoum	6		8		8	
		9-In progress		7-In progress		5-In progress
Dr.Saad Parvez			2		2	
Dr. S. Shahid Saleem	4				1	
Mr. Sheikh Ghulam Mohammad						
Dr. Mohammad Hanief	2		2		1	
		4-Registered		3-Registered		
Dr. M. S. Charoo	4		9		1	
		5-Registered		5-Registered		
Dr. M. Mursaleen	9	2-Registered				
Assessment	20					

5.8.2 Sponsored Research (20)

Project Title	Funding Agency	Amount	Duration
Development of High Temperature Tribology laboratory	F.I.S.T scheme DST	70 lacs	2012-2016
High Temperature Tribological Characterization of Non-Oxide Ceramics and Composites	Department of Science and Technology, New Delhi	17.5 lacs	2011
Assessment			20

5.8.3 Development Activities (15)

In House Product Development:

S. NO	NAME OF THE PROJECT	COST	DATE
1.	Value Addition and development of a room heating “Bukhari” , NIF sponsored project	Rs. 98000/-	2017
2.	Design and fabrication of a Walnut De-hulling machine for Horticulture sector of J&K , NIF sponsored project	Rs. 50000/-	2017
3.	Working model of a balancing bot.	In house construction	2015
4.	Working model of a Ball on a Plate system	In house construction	2016
5.	Magnetic levitation model for class room demonstration	In house construction	2016
6.	Toy gyroscope for class room demonstration	In house construction	2016
7.	A portable dual channel digital storage oscilloscope, for the purpose of class room demonstration in the Mechatronics course.	Rs. 98000/-	2017
Assessment		15	

5.8.4 Consultancy (from Industry) (20)

Assessment	0
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5.9 Faculty Performance Appraisal and Development System (FPADS) (10)

The institute has in place a continuous, incisive, well-organized, and effective faculty performance appraisal system for the faculty members. For this purpose an “Annual Assessment Report for the Faculty and the Staff” is prepared for every member. This report gives a detailed description of the members’ contribution to teaching-learning process, contribution in laboratory development, course development and development of teaching aids, laboratory manuals, and special lectures. In addition, participation in and organization of seminars, symposia, conferences, continuing education programs, research and development activities, sponsored research projects, contribution to department and institute administration, etc., are also taken into account. A copy of the Assessment form is provided in the Annexure.

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

Assessment	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 as under:

Sl. No.	Date	Name of Event	Resource person
01	April 3, 2017	Seminar on “Emerging trends in Android based mobile app”	Mr. Abhishek Kumar, Senior Corporate Technical Trainer (IBM Experts)
02	April 15-16, 2017	Two day’s workshop on Robotics	Utkranti, eDC Team, IIT Delhi
03	April 29-30, 201	Two day’s Workshop on “PLC & SCADA”	CETPA Infotech. Pvt. Ltd.

04	May 6-7, 2017	Two day's workshop cum National Championship on Internet of things	TechieNest Pvt. Ltd. And IIT Hyderabad
05	June 10, 2017	Interaction session with Kashmir's Entrepreneurs	Founder of KashBook, Co-Founder of Captivating Kashmir and INSPIRE award winner Zufa Iqbal
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 Center, NIT Srinagar
07	Oct 2, 2017 (MEGA EVENT)	IDEA CHALLENGE 2017 – "The Future World"	IIED Center
08	Oct 2, 2017	Swach Bharat Abhiyan	Srinagar Municipal Corporation
09	Oct 2, 2017	Orientation Session of Batch 2016 & Batch 2017	IIED Center
10	Oct 5, 2017	Orientation program of "The Better You"	STARTUP KASHMIR
11	Oct 29, 2017	One day seminar on "Importance of international certification in Design, Automation and IT industries"	CETPA Infotech. Pvt. Ltd.
12	Nov 2, 2017	Interaction Session with "Prof. Anil Kumar Gupta", Founder of Honey Bee Network.	Central University of Kashmir
13	Nov 9, 2017	Catalysing a cultural shift in youth entrepreneurship	EDP Cell on National Entrepreneurship Day

Assessment	10
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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 laboratory	No of students per batch (Batch size)	Name of important equipment	Weekly utilization status (all the course for which the lab is utilized)	Technical manpower		
					Name of the technical officer	designation	Qualification
1	Steam Lab	40	<ol style="list-style-type: none"> Boiler (fire tube nestler boiler) Model of various types of boilers. 	Steam Lab(Even sem)(12hr/week)	Muzzafar Ahmad	LaB. Technician	Diploma in Mechanical Engineering
2	IC Engines	40	<ol style="list-style-type: none"> Single Cylinder C.I Engine Based Test rig (2 No) Constant Speed single cylinder SI engine based test rig Multi Cylinder SI Engine Based Test rig 4Stroke Petrol Cut section model of single cylinder CI engine Demonstration model of petrol engine Demonstration model of diesel engine 	1. Internal combustion engineering Lab(Even sem)(12hr/week)	Ifthikhar Ahmad	1st grade instructor	Diploma in Automobile Engineering

3	Fluid Mechanics Lab	40	<ol style="list-style-type: none"> 1. Pipe friction Apparatus 2. Venturimeter & Orifice meter apparatus 3. Orifice & Mouthpiece Apparatus 4. Notch tank Apparatus 5. Apparatus for Determination of Metacentric height 6. Minor losses determination apparatus 7. Bernoulli's theorem apparatus 8. Adjustable channel test rig 9. Reynolds apparatus 	<ol style="list-style-type: none"> 1. Fluid Mechanics Lab (Even sem) (12 hr./week) 2. Fluid Mechanics and Machines Lab(Even sem) (12hr/week) 	Muzzafar Ahmad	LaB. Technician	Diploma in mechanical engg
4	Heat Transfer Lab	40	<ol style="list-style-type: none"> 1. Air Conditioning and refrigeration equipment 2. Double pipe and shell and tube heat exchangers 3. Emissivity apparatus 4. Free and forced convection apparatus 5. Lagged pipe Thermal Conductivity apparatus 6. Composite walls 	1.Heat Transfer Lab(Even sem)(12 hr./week)	Muzzafar ahmad	LaB. Technician	Diploma in mechanical engg
5	Dynamics lab	40	<ol style="list-style-type: none"> 1. Whirling of shaft apparatus 2. Motorized Gyroscope 3. vibration analyser 4. Watt governor 5. Hartnell governor 6. Rotary air compressor 7. Static and Dynamic balancing 	Dynamics Lab(Even Sem) (12hr/week)	Bashir ahmad	1st grade instructor	Diploma in Mechanical Engineering

			8. machine 9. Fluidised Bed Apparatus 10. universal governor apparatus				
6	Mechatronics Lab	40	1. Distance & displacement sensor kit 2. PLC training & Console system ,software logic controller 3. DC large tool maker microscope & accessories 4. Arduino Leonardo & headers 5. ultrasonic sensor module 6. groove single & analogue gyroscope 7. groove encoder 8. weight sensor 9. Tamiya dual motor gearbox 10. Rotary potentiometer 11. Digital oscilloscope 12. Advanced sensor trainer kit 13. USBPL interfacing unit	Mechatronics Lab 2(Even sem) (12hr/week)	Bashir ahmad shah	Technical officer	Middle pass
7	CAD Lab	40	Computers with Windows 8 and Ansys, AutoCAD 2018	1. CAD and Analysis Lab(6hr/week) (Even sem) 2. Computer Aided Machine Drawing Lab(Odd Sem)(6 hr/week)	Syed Mohammad	Senior technical assistant	Diploma in mechanical engg
8	Production engg Lab	40	1. Lathe machine 2. Bench drilling machine	1.Production Engineering	Bashir Ahmad	Technical officer	Middle pass

			<ol style="list-style-type: none"> 3. Bench grinding machine 4. Shaping machine 5. Surface grinding machine 6. CNC lathe machine 7. CNC milling machine 8. EDM machine 	Lab(Odd Sem) (12 hr/week)			
9	Tribology lab	5	<ol style="list-style-type: none"> 1. Four ball tester 2. nano indenter 3. pin on disc tribometer 4. ball on disc tribometer 5. friction and wear tester 6. optical microscope 7. micro hardness tester 8. optical profilometer 9. high energy ball milling 10. sintering furnace 11. EDX 12. SEM 13. XRD 14. Raman spectroscopy 	Tribological engineering (12hour/week)	G N Lolpuri	Technical Assistant	Diploma in mechanical Engg
10	Industrial Engg Lab	10	<ol style="list-style-type: none"> 1. Therbligs chart industrial engineering flowchart 2. ergonomics chart 	Industrial engineering lab (12 hours/week)	Syed Mohamm ad	Senior technical assistant	Diploma in mechanical engg
11	Advanced Strength of Material Lab	10	<ol style="list-style-type: none"> 1. Servohydraulic Fatigue Testing Machine 2. Impact Testing Machine 3. Video Gauge 4. Universal testing machine 5. Rockwell and Brinell Hardness Tester 6. Micro Vickers hardness tester 7. Torsion Testing Machine 	Advanced Strength of Material Lab (12 hours/week)	Syed Mohamm ad	Senior technical assistant	Diploma in mechanical engg

6.1.1. Additional facilities created for improving the quality of learning experience in Laboratories

S No	Facility Name	Details	Reasons for creating facility	Utilization	Areas in which students are expected to Have enhanced learning	Relevance to POs/ PSOs 1
1	Advanced computational lab	5 high end Servers For advanced modelling	ANSYS, 3 D Solid works	Mathematical modulation in various field of research	Material science, Fracture Mechanics	PO 1 PO 2 PO 3 PO 10
2	Turbine Erosion testing lab	Testing of pelton turbine erosion characteristics	To give an awareness to students Regarding erosion of turbine blades	Determine erosive coatings for the turbine materials	Tribology , Fracture mechanics	PO 1 PO 2 PO 3 PO 10
3	Advanced Thin Film Lubrication	Testing effects of hydrodynamic lubrication	To give an awareness to students Regarding lubrication effects	Design bearings and there materials	Tribology, Fracture mechanics	PO 1 PO 2 PO 3 PO 10
4	Advanced Strength Materials Laboratory	Testing various cermet materials	To give an awareness to students Regarding new high strength materials	Aviation, missile technology materials	Material science	PO 1 PO 2 PO 3 PO 10
5	Wi-Fi	Up to 100 Mbps speed	Wireless access of internet	Can access Wi-Fi from anywhere anytime in the campus	For knowledge sharing	PO 10 PSO 1 PSO 2
6	White boards	All labs are equipped with white board	For explaining experiments	For delivering the procedure and steps involved in the design of experiments	Better understanding of the procedure	PO 1 PO 2 PO 3 PO 10
7	Projector	Extra projector which can be used in any lab	For explaining experiments	For demonstrating simulations, To conduct special training programs	To acquire extra knowledge	PO 1 PO 2 PO 3 PO 10

6.2. Laboratories: Maintenance and overall ambiance (10)**General Working of labs**

The laboratories are maintained with all equipment in good working order.

The preventive maintenance of the equipment carried out regularly and the details thereof are entered in the equipment register that is kept in the laboratory.

All laboratories are adequately ventilated.

The machines are arranged so that the student can feel comfortable to work.

The lists of experiments that are being carried out are shown in all laboratories.

All laboratories have computers with an Internet connection to improve the learning experience.

Whiteboards are provided in all laboratories for informational experiments for students

CAD Lab

The cad lab of the department has all the computers in good working condition and Internet service.

The laboratory is provided with enough soft products that include those outside the curriculum for a better learning experience.

The preventive maintenance of the laboratory is done once a month.

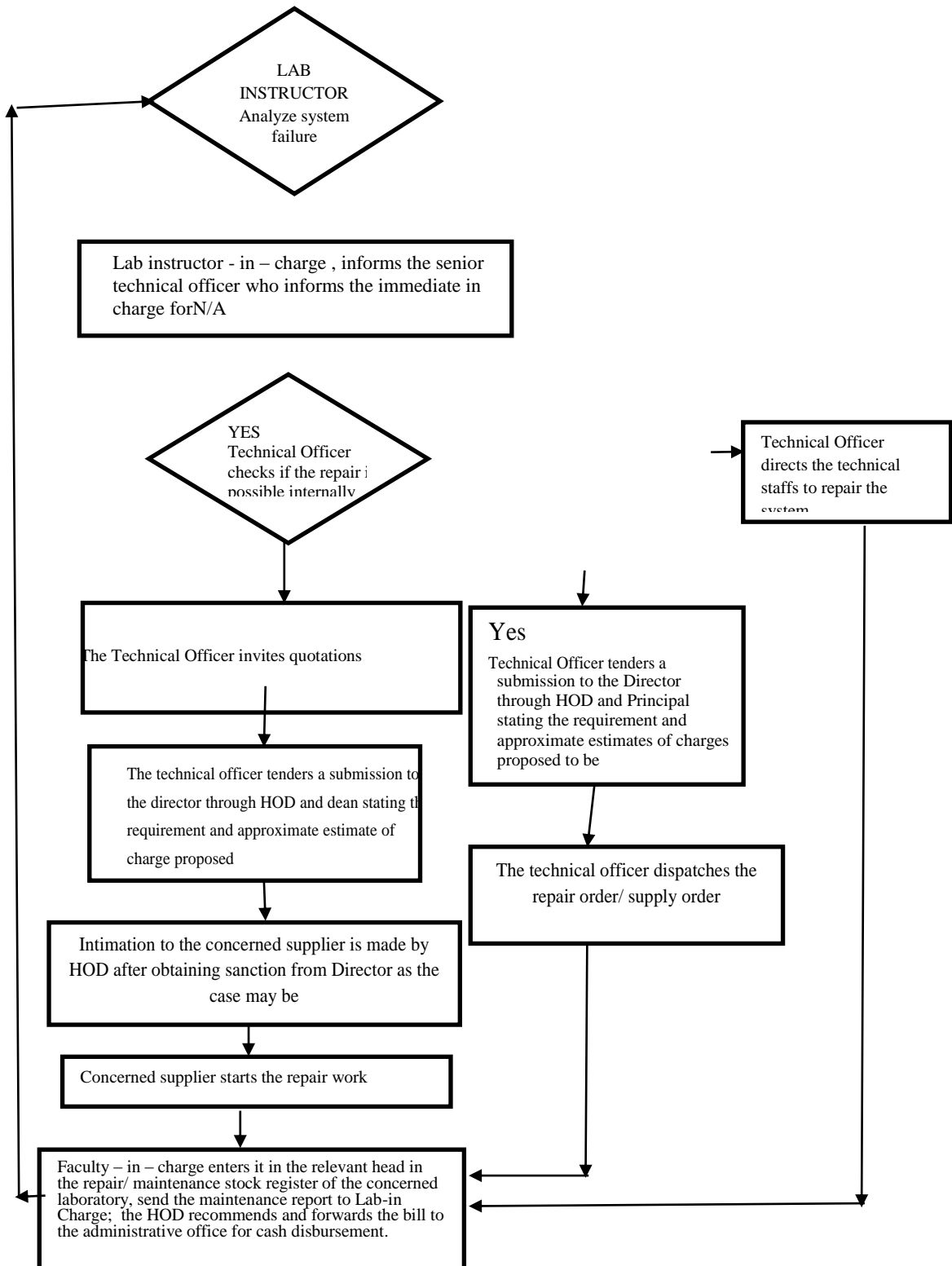
Each computer in the laboratory is assigned a unique identification number.

Any repair or maintenance performed is recorded in the record kept in the laboratory with respect to the identification number of each computer.

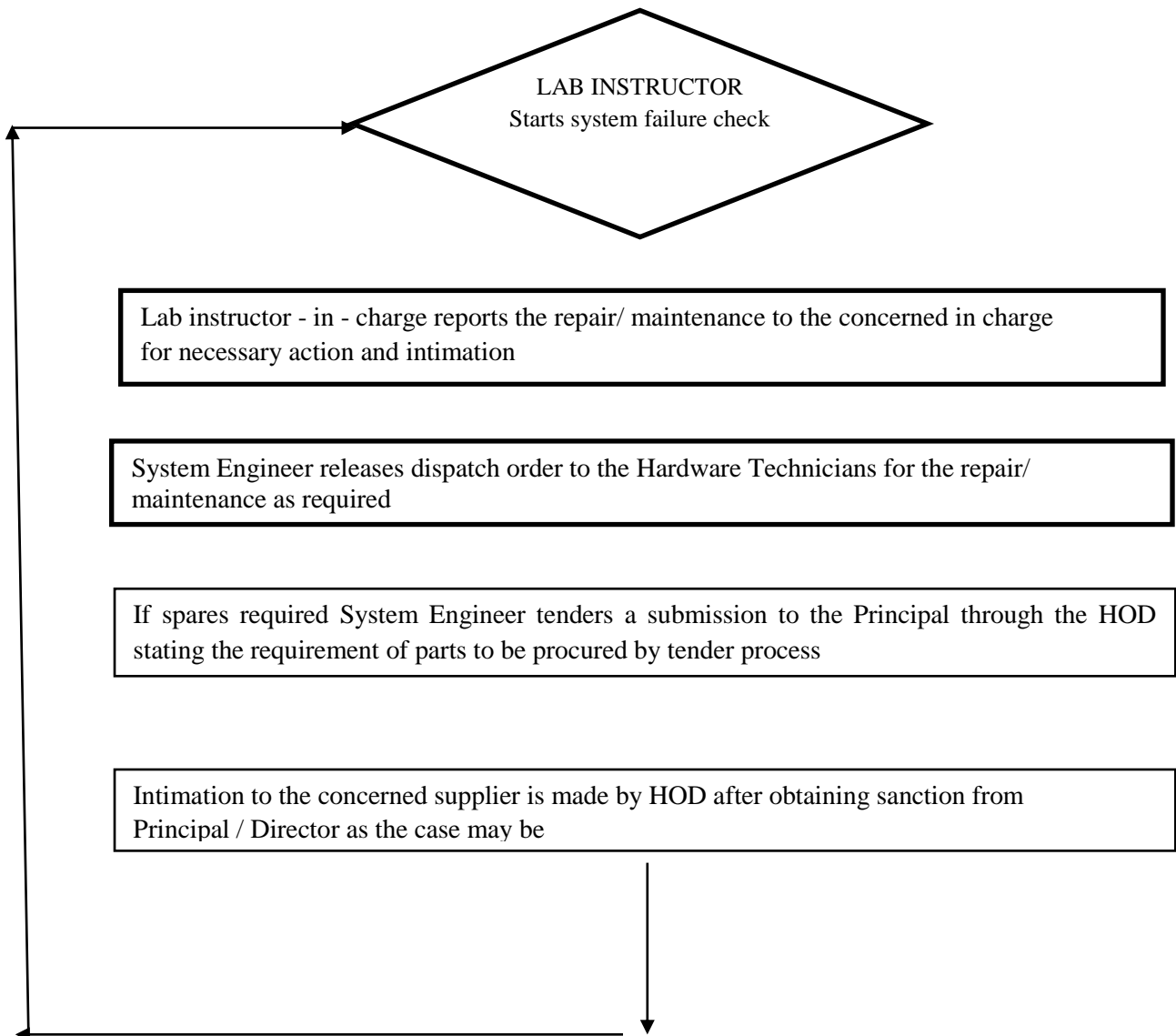
The laboratory has an uninterrupted power supply (UPS).

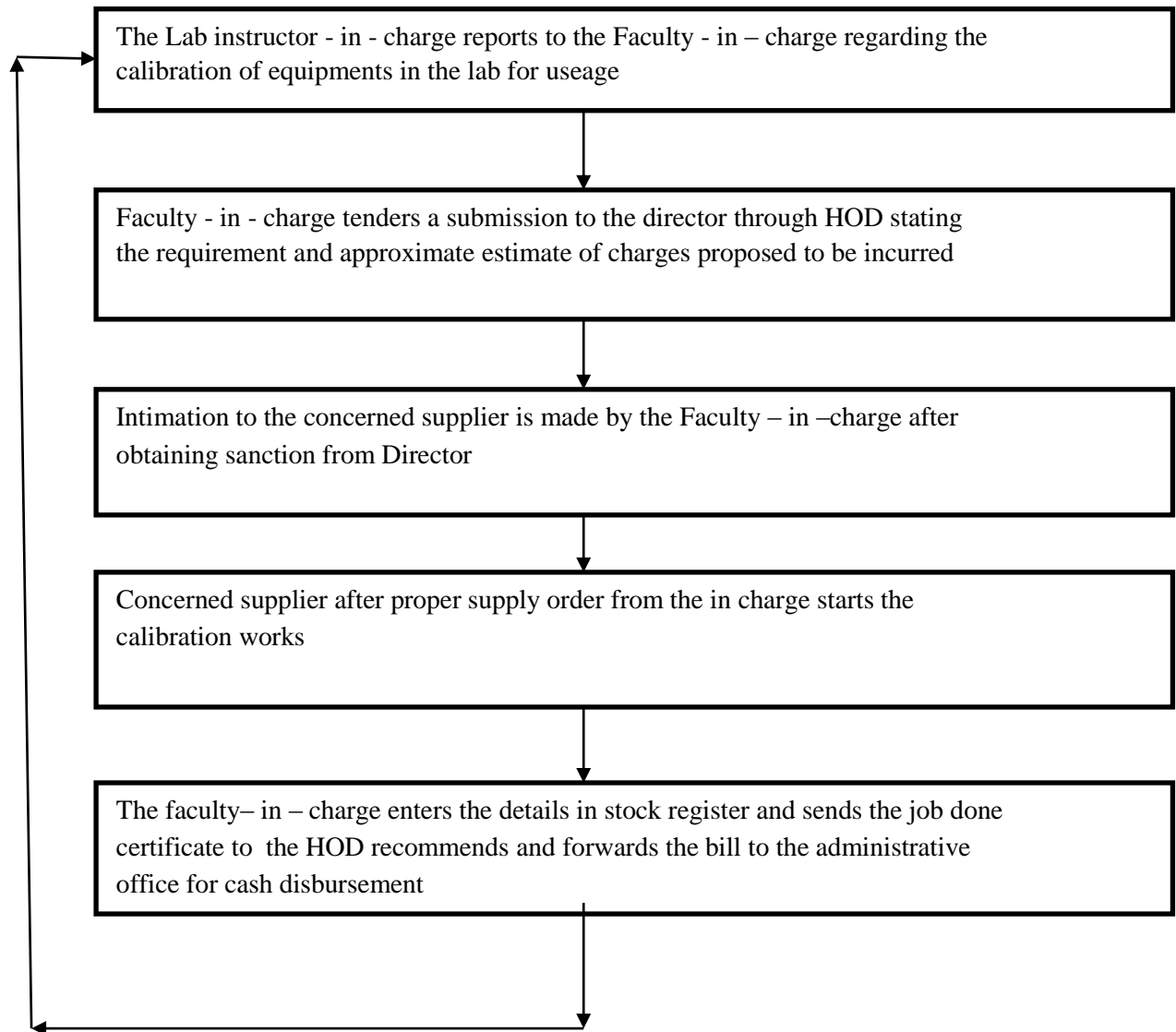
The laboratory is well lit and with air conditioning.

Process for conducting maintenance and repairs of the lab equipment in the Mechanical Engineering Department



**Process for conducting maintenance and repairs of the computers in the labs of
Mechanical Engineering Department**



Process for conducting calibration of the lab equipment in the department**6.2.1 Ambiance of the laboratories****Steam Lab**

The steam lab is equipped with a sufficient number of machines as prescribed in the syllabus. The lab is equipped with various boilers and its extras. The lab is well lit and well ventilated. The lab is used for various courses in mechanical engineering, the B.Tech.. program and for various project work



Steam Lab

Production Technology Lab

The Production Technology Laboratory is one of the department's largest laboratories, which is equipped with a sufficient number of machines as prescribed in the curriculum and subsequently. The laboratory is equipped with a lathe, forming machine, slot machine, milling machine, drill, grinder and CNC lathe. The laboratory is well lit and well ventilated. The laboratory is equipped with additional computer equipment for a better learning experience. The laboratory is used for several B. Tech mechanical engineering courses and for different



Production technology Lab



CNC Machine in the Production Technology Lab

Fluid Mechanics Lab

The fluid mechanics laboratory consists of various flow measurement devices such as notches, venturimeter and orifice meter, orifice and nozzle apparatus, Reynolds apparatus, tube friction apparatus, Bernoulli theorem apparatus, loss determination apparatus Minors

and adjustable channel apparatus. The laboratory consists of experimental configurations beyond the curriculum for a better learning experience



Fluid Mechanics Lab.

Internal Combustion Engines Lab

The heat engine laboratory consists of various engine test equipment, engine test rigs platforms, redwood viscometer, flash point and fire point tester, and pump calorimeter. The laboratory is also equipped with a cut engine section, various auto parts accessories for a better learning experience. The laboratory is widely used for various project works. The laboratory has additional computer facilities for a better learning experience.





Internal combustion engine lab

Heat transfer Lab

The lab consists of various equipment which describe basic heat transfer modes of conduction, convection and radiation and refrigeration and air conditioning equipment. The lab is mainly utilized by students of mechanical engineering department.



Heat transfer lab

Tribology Lab

The subject TRIBOLOGY deals with the technology of lubrication, friction control and wear prevention of surfaces having relative motion under load. The laboratory facilitates study on wear of materials and performance of lubricants under Various Test Conditions.

Experiments performed on various Industrial materials in dry or lubricating conditions with increase of lubricating oil temperature for measuring frictional wear, coefficient of friction etc. under various load conditions. Subsequently data are transferred through Data Acquisition System sensed by inbuilt sensors

Following are the machines/equipment in this Laboratory:

1. Four ball tester 2. Nano indenter 3. pin on disc tribometer 4. ball on disc tribometer 5. friction and wear tester 6. optical microscope 7. micro hardness tester 8. optical profilometer 9. high energy ball milling 10. sintering furnace 11. EDX 12. SEM 13. XRD 14. Raman spectroscopy



Four Ball Tester



Optical Microscope



Nano indenter Machine



Nano indenter



Universal Tribometer



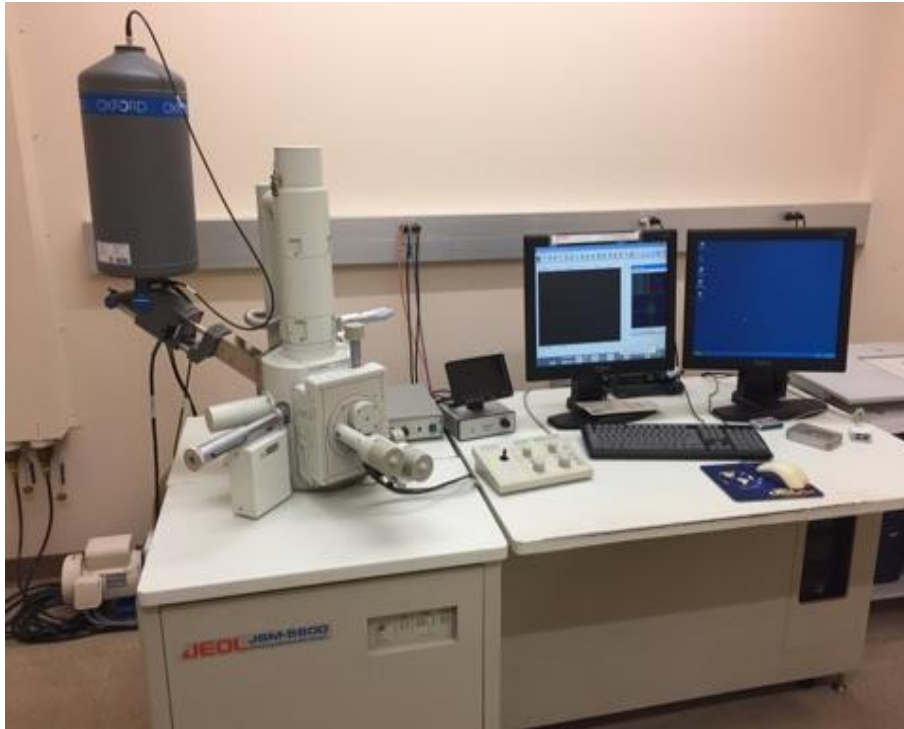
Planetary Ball Mill



Sintering Furnace



Scanning Electron Microscope



XRD



Raman Spectroscopy



Rheometer

Mechatronics Lab

The Mechatronics Lab provides state of the art facilities and experimental setups to learn and enjoy the field of mechatronics. Modern society depends on mechatronic-based systems for modern conveniences. From intelligent appliances to safety features in cars such as air bags, and antilock brakes, mechatronic systems are widely used in everyday life.



PCB



PLC Training Kit

Dynamics lab

Mechanisms form the basis of any machine and it is an assemblage of rigid bodies so that they move upon each other with definite relative motion.

Objectives of this Theory of Machines lab are to impart practical knowledge on design and analysis of mechanisms for the specified type of motion in a machine. With the study of rigid bodies motions and forces for the transmission systems, machine kinematics and dynamics can be well understood.

Demonstration exercises are provided with wide varieties of transmission element models to understand machine kinematics. Various experiments with governors, gyroscopes, balancing machines and universal vibration facilities are available to understand machine dynamics.



Static and Dynamic Balancing Machine

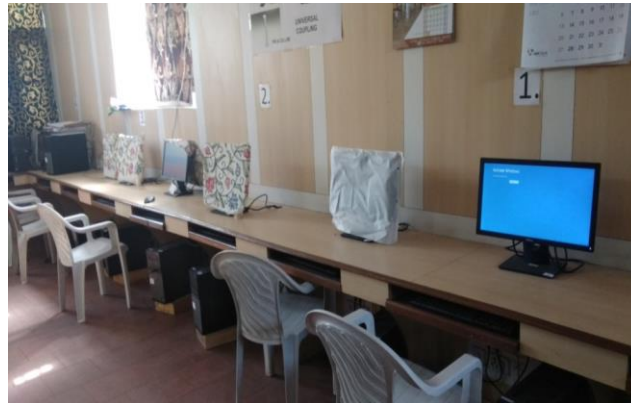


Whirling of Shaft Apparatus

CAD Lab

The **CAD** introduces student to the process planning and the tools that are needed to carry for process planning. Process planning is an engineering activity that determines the appropriate procedures for transforming raw materials into a final product as specified by an engineering design. Engineering designs are conventionally documented using detailed diagrams indicating important design characteristics such as dimensions, tolerances,

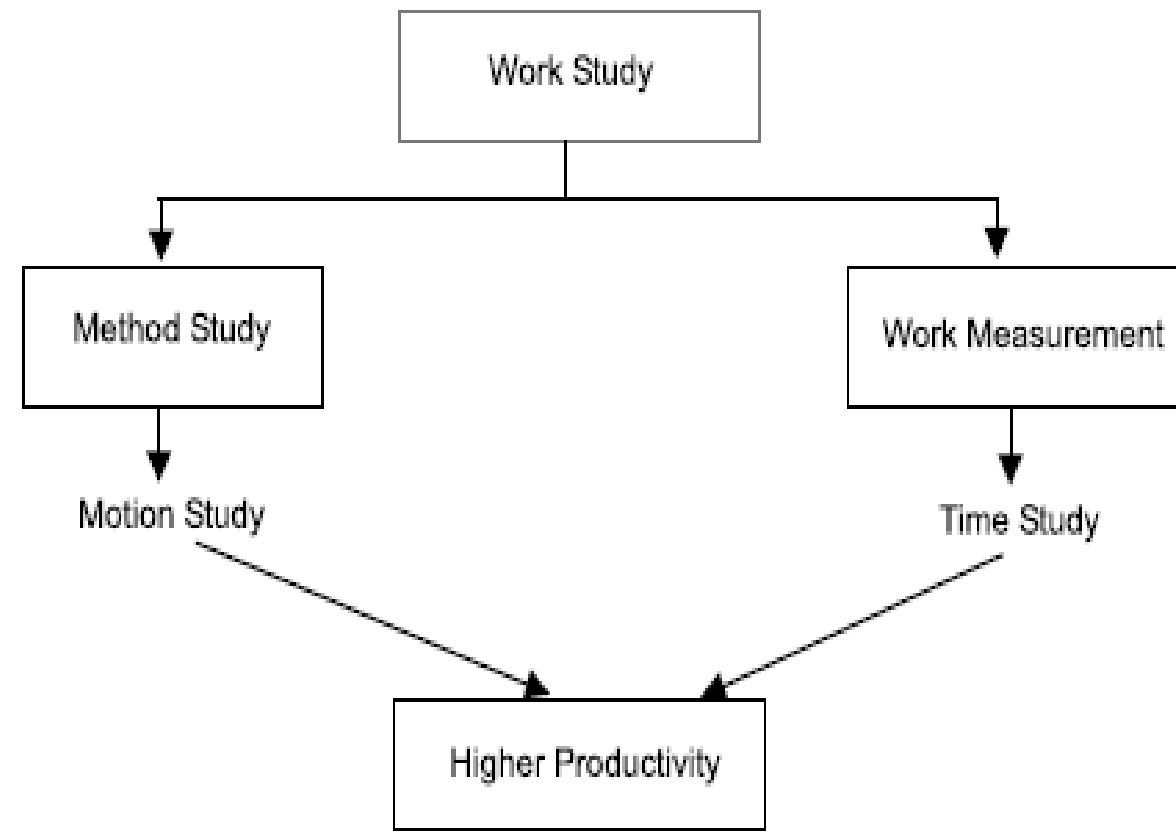
materials, and other pertinent specifications. Even though these diagrams convey a large amount of information about a design, they are incomplete in that they do not describe the manufacturing steps necessary to produce the final part. Effective process plans provide this information. In practice, design, process planning, and manufacturing are interrelated since the capabilities and characteristics of available equipment, manufacturing processes, and personnel can have a significant impact on the final design of a product.



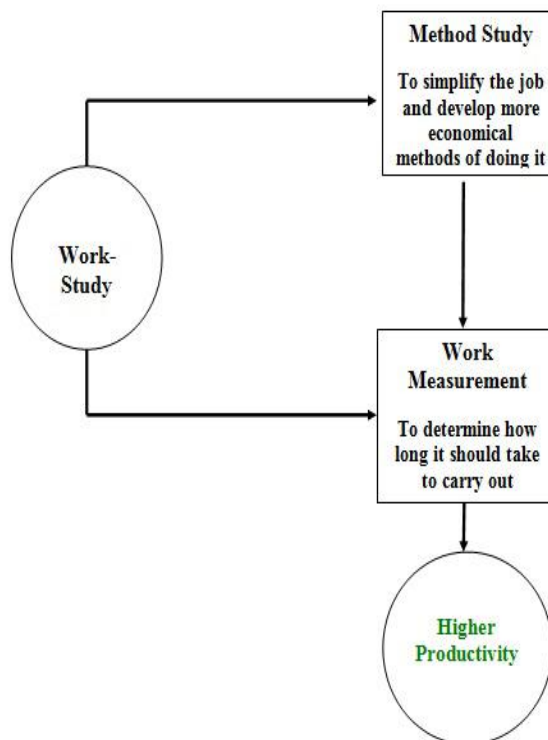
CAD Lab

Industrial Engineering Lab

Industrial engineering lab is concerned with the analysis, design, improvement, and installation of integrated systems of people, material, information, equipment, and energy. Industrial Engineering is where engineering meets business. Industrial engineers are specially trained to eliminate practices that waste time, money, energy and other resources. Graduates in industrial engineering can work in almost any industry, including manufacturing, healthcare, logistics, transportation, finance, electronics, entertainment and many others.



IE Lab charts



IE Lab Charts

Advanced Strength of Material Lab

The subject Advanced Strength of Material deals with the study of material behaviour and characterization of its physical properties under various loading and environments conditions. The laboratory have facilitates to handle very high temperature as well as very low temperature tests(1200to -150 degree),and high impact tests(506m/s).



Figure Servo hydraulic Fatigue Testing Machine



Figure Impact Testing Machine



Figure Universal testing machine



Figure Rockwell and Brinell Hardness Tester

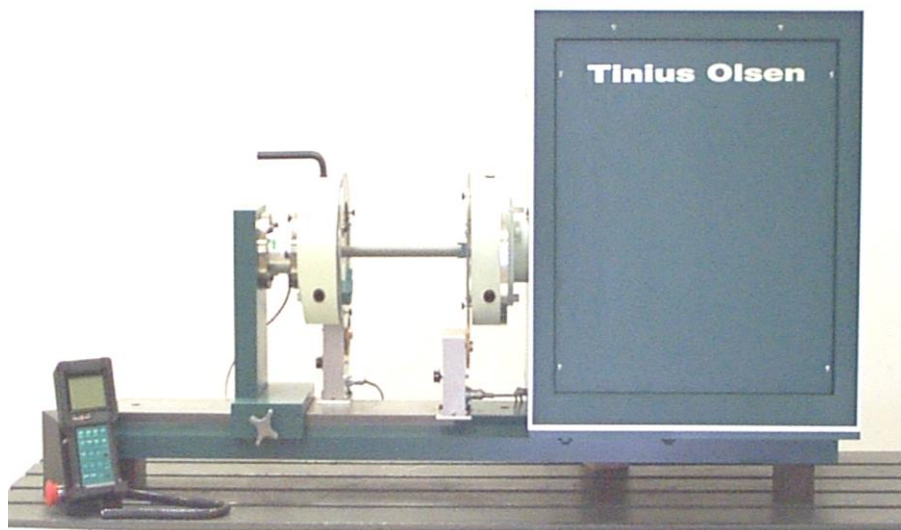


Figure Torsion Testing Machine

6.2.3. Details of some best projects done by students

Batch	Project	No of Students	Project Guide
2011	Semi-Autonomous tele-operated urban search and rescue(USAR) robot	5	Prof. G. A. Harmain
2013	Condition monitoring of worm gear box oil analysis technique.	1	Prof. M. F. Wani
2013	Design and fabrication of wearable haptic device.	4	Prof. Babar Ahmad

6.3. Safety Measures in Laboratories

(10)

There are some safety precautions to be followed for the safe operation of machines and tools in the labs. There laid a number of safety precautions in all the labs which are strictly followed during working hours. All the labs are equipped with sufficient safety measures if there occurs any mishap. The safety measures provided with each lab are listed below.

S No	Name of Laboratory	Safety Measures
1	Steam Lab	Fire extinguisher-2Nos, goggles, exhaust fan -5 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
2	I C Engine	Fire extinguisher-2Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
3	Fluid Mechanics	Fire extinguisher-1Nos, goggles, exhaust fan -2 Nos.

		First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
4	Heat Transfer	Fire extinguisher- 1Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
5	Dynamics	Fire extinguisher- 1Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
6	Mechatronics	Fire extinguisher- 2Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
7	CAD	Fire extinguisher- 1Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
8	Production	Fire extinguisher- 5Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid

		and binding cloth.
9	Tribology	Fire extinguisher- 2Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
10	Industrial Engineering	Fire extinguisher- 1Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.
11	Advanced Strength of Material Lab	Fire extinguisher- 1Nos, goggles, exhaust fan -2 Nos. First aid box contains Burnol cream, Betadine ointment, Dettol, cotton, band aid and binding cloth.

6.4. Project Laboratory

(20)

Facilities & Utilization

The Department of Mechanical Engineering maintains a separate Projects Laboratories to provide a platform for students to work in their research and innovation projects. The laboratories have shelves for storage and workbenches.

The students have following regular and additional facilities for the Project work.

Sl. No.	Regular Facilities	Utilization
1.	CNC Milling Machine	To learn and perform machining operations
2.	CNC Lathe Machine	To perform turning and facing operations of metal Blocks
3.	MIG /TIG/Spot Welding machine	To do metal joining and study various weld defects
4.	Computerized UTM	Material Testing [Mechanical Properties, Stress strain
5.	Torsion machines	To perform material testing for various mechanical properties
6.	Drilling machine	To make a hole and perform boring
7.	Grinding Machine	To perform machining operations using abrasive materials

8.	Impact testing machine	To perform material testing for various mechanical properties
9.	Hardness testing machine	To perform material testing for various mechanical properties

Sl. No.	Additional Facilities	Utilization
1.	Petrol Engine Test Rig	To experiment and analyse Petrol engine Performance for different parameters
2.	Diesel Engine Test Rig	To evaluate diesel engine performance and explore its various parameters
3.	Solid Modeling and Analysis Software's	Geometric modeling in 3-D and to represent the solid parts on computer for simulation and computation for engineering problems.
4.	Fatigue Testing Machine	Design projects, PG dissertation and research work.
5.	Impact Tester	UG Projects and PG dissertation
6.	Universal Hardness Tester	PG dissertation and research work
7.	Micro-Hardness Tester	PG dissertation and research work
8.	Video Gauge	Support existing laboratory experiments,
9.	Rapid prototyping Machine	UG Projects, PG dissertation and research work
10.	Sintering Fabrication Instrument	UG Projects, PG dissertation and research work
11.	Nano-indenter	UG Projects and PG dissertation
12.	X-ray Diffract meter Instrument	UG Projects and PG dissertation
13.	Scanning Electron Microscopy Instrument	UG Projects and PG dissertation
14.	Advanced computational lab	UG Projects and PG dissertation
15.	Gas exhaust gas analyser	Support existing laboratory experiments,
16.	Erosion Test Rig	UG Projects and PG dissertation
17.	Magnetic Flow meter	UG Projects and PG dissertation
18.	Portable Surface Roughness Tester	UG Projects and PG dissertation
19.	Online UPS system	Support research and innovation.
20.	Digital Micrometer	Support existing laboratory experiments,
21.	Axial Flow Fan Test Rig	UG Projects and PG dissertation
22.	Universal Tribometer	UG Projects and PG dissertation

CRITERION 7	CONTINUOUS IMPROVEMENT	75
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1.1. Actions taken based on the results of evaluation of each of the POs & PSOs (20)

POs & PSOs Attainment Levels and Actions for improvement – CAY 2017 –18

POs	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of applied mathematics, science & technology, engineering fundamentals and an engineering specialization to the solution of complex practical engineering problems.			
PO1	1.77	2.26	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action taken:			
<ol style="list-style-type: none"> In Engineering Graphics, tutorial session will be conducted based on previous university question paper. In Introduction to Mechanical Engineering, Bridge course will be offered for reinforcing their knowledge about engineering fundamentals. 			
PO2: Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	1.60	1.99	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken:			
<ol style="list-style-type: none"> In Mechanics of Solids, application oriented problems will be offered to improve logical thinking. In Thermodynamics, tutorial session will be taken for the application/real life problem. 			
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO3	1.55	1.93	Attainment level has been reached. The following actions are made in order to sustain this attainment level.

<p>Action Taken:</p> <ol style="list-style-type: none"> 1. In Non-Destructive Testing, NPTEL classes will be conducted. 2. In Mechanics of Machinery, remedial session can be arranged to enhance the performance of the students. 			
<p>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.</p>			
PO4	1.48	1.77	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Action Taken:</p> <ol style="list-style-type: none"> 1. In Operations Management, ICT based teaching can be enhanced to sequencing problems. 2. Workshop on Design of Experiments will be conducted. 3. Ensure the quality of seminars and projects undertaken by the students. 			
<p>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.</p>			
PO5	1.44	1.66	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Action Taken:</p> <ol style="list-style-type: none"> 1. Workshop on Latex will be conducted. 2. Workshop on Autodesk will be conducted 			
<p>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.</p>			
PO6	1.35	1.55	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Action Taken:</p> <ol style="list-style-type: none"> 1. Awareness on Fire and Safety will be given for the topic responsibility of engineers in safety 2. Students were promoted to participate in social clubs like NSS, Nature club, Social welfare club. 3. Students were promoted to give away their time for charity works 			

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	1.31	1.54	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: <ol style="list-style-type: none"> 1. Awareness on Energy Auditing will be given for the topic responsibility of engineers in rights 2. Awareness on Nuclear Energy will be given for the topic responsibility of engineers in sustainable environment 3. Proper guiding were given to the students to implement projects leading to right selection and optimized material that lead to a sustainable environment 			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	1.33	1.62	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: <ol style="list-style-type: none"> 1. Guest Lecture will be taken in the topic related to professional ethics / value education 2. Guest Lecture will be taken in the topic related to personality development 			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	1.39	1.79	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: <ol style="list-style-type: none"> 1. By exposing students to various club activities, students were given a platform where they are function effectively as an individual and as a member in a team. 2. Various students' chapter activities will be conducted to demonstrate abilities as a member in the 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	1.43	1.79	Attainment level has been reached. The following actions are made in order to sustain this attainment level.

Action Taken: 1. Students will be trained in the project to comprehend and write the effective reports and make effective presentations. 2. Students were encouraged to participate in class room presentations.			
PO11: Project management and finance: 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.			
PO11	1.33	1.67	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Project hours are included in the curriculum for project work. 2. Students are encouraged to handle financial management during Technical & Non – Technical Festivals.			
PO12: Life-long learning: 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.			
PO12	1.49	1.85	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Inculcated a broad concept regarding the recent advancements in technology 2. Students were motivated to enrol for higher studies.			
PSO1: Competent, creative and imaginative mechanical engineers: Students shall be competent, creative and imaginative mechanical engineers employable in fields of design, research, manufacturing, safety, quality, technical services.			
PSO1	1.71	2.14	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Extra sessions were added for Technical Talk by experts			
PSO2: Higher Studies: Students shall be able to progress through advanced degree, certificate programs or participate in continuing education in mechanical engineering, business, and other professionally related fields.			
PSO2	1.47	1.83	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Proper guiding for the right placements was given. 2. Extra lab sessions were added for Advanced and Design Experiments.			

POs & PSOs Attainment Levels and Actions for improvement – CAY 2016 – 17

PO's	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	1.77	2.27	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. In Design of Machine Elements, students will be given task on library for the topic Design of Shaft. 2. In Refrigeration and Air Conditioning, Assignment will be given for the students in the topic basics of thermodynamics			
PO2: Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO2	1.60	2.03	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. In Design and Engineering, additional class will be taken for the topic Smoke Detector. 2. In Fluid Mechanics, tutorial session may be given on flow through circular pipe.			
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO3	1.55	1.88	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. In Dynamics of Machinery, Additional class will be taken for the topics Natural Frequency of Vibration. 2. In Refrigeration and Air Conditioning , students will be asked to register for NPTEL online courses			

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	1.48	1.78	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Action Taken:</p> <ol style="list-style-type: none"> Value added course on Design of Experiments will be conducted to get aware of the analysis tools. In Design and Engineering, Assignments will be given for the topic Speed Breaker Producing Electricity 			
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	1.44	1.74	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Action Taken:</p> <ol style="list-style-type: none"> Value added course (Latex) will be conducted to get awareness of the modern engineering tools 			
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	1.35	1.62	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Action Taken:</p> <ol style="list-style-type: none"> NSS activity, Nature Club and Social Welfare activity to assess societal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice 			
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	1.31	1.66	Attainment level has been reached. The following actions are made in order to sustain this attainment level.

Action Taken: 1. Awareness program on Nuclear Energy will be arranged for the students to understand the impact of the professional Engineering solutions in Societal and Environmental contexts			
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO8	1.33	1.79	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. In Project Management, assignment will be given in the topic “Business ethics”. 2. Guest Lecture will be taken in the topic related to value education			
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO9	1.39	1.84	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Project expo will be conducted to improve the individual and team spirit 2. Project Courses are conducted to demonstrate abilities as a member in the 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	1.43	1.92	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Seminar class will be conducted to improve communication skills. 2. Soft skill classes will be conducted to communicate effectively on complex engineering activities.			
PO11: Project management and finance: 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.			
PO11	1.33	1.68	Attainment level is moderately deviated and to overcome this, the following actions are made.

Action Taken: 1. In Principles of Management, assignment can be given in the topic “Management by Objective”. 2. Final year student projects will be evaluated			
PO12: Life-long learning: 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.			
PO 12	1.49	1.93	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. In Principles of Management, topic "Leadership Theory" will be taken in PPT. 2. Industrial visits will be arranged for ability to engage in independent and life- long learning.			
PSO1: Competent, creative and imaginative mechanical engineers: Students shall be competent, creative and imaginative mechanical engineers employable in fields of design, research, manufacturing, safety, quality, technical services.			
PSO1	1.71	2.18	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Students will be given awareness of modern tools in research. 2. Students will be given awareness of modern materials and manufacturing			
PSO2: Higher Studies: Students shall be able to progress through advanced degree, certificate programs or participate in continuing education in mechanical engineering, business, and other professionally related fields.			
PSO2	1.47	1.87	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
Action Taken: 1. Students will be given awareness of advanced certification degree programs in mechanical engineering.			

POs & PSOs Attainment Levels and Actions for improvement – CAY 2015 – 16

PO's	Target Level	Attainment Level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			

PO1	1.77	2.09	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> In Design of Machine Elements, students will be given task on library for the topic Design of Shaft. In Refrigeration and Air Conditioning, Assignment will be given for the students in the topic basics of thermodynamics 			
<p>PO2: Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.</p>			
PO2	1.60	1.84	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> In Design and Engineering, additional class will be taken for the topic Smoke Detector. In Fluid Mechanics, tutorial session may be given on flow through circular pipe. 			
<p>PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.</p>			
PO3	1.55	1.71	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> In Dynamics of Machinery, Additional class will be taken for the topics Natural Frequency of Vibration. In Refrigeration and Air Conditioning , students will be asked to register for NPTEL online courses 			
<p>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.</p>			

PO4	1.48	1.58	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> Value added course on Design of Experiments will be conducted to get aware of the analysis tools. In Design and Engineering, Assignments will be given for the topic Speed Breaker Producing Electricity 			
<p>PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.</p>			
PO5	1.44	1.44	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> Value added course (Latex) will be conducted to get awareness of the modern engineering tools 			
<p>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.</p>			
PO6	1.35	1.47	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> NSS activity, Nature Club and Social Welfare activity to assess societal and cultural issues and the consequent responsibilities relevant to the professional Engineering practice. 			
<p>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.</p>			
PO7	1.31	1.39	Attainment level has been reached. The following actions are made in order to sustain this attainment level.

<p>Actions to be taken:</p> <p>1. Awareness program on Nuclear Energy will be arranged for the students to understand the impact of the professional Engineering solutions in Societal and Environmental contexts.</p>			
<p>PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.</p>			
PO8	1.33	1.61	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <p>1. In Project Management, assignment will be given in the topic “Business ethics”.</p> <p>2. Guest Lecture will be taken in the topic related to value education</p>			
<p>PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.</p>			
PO 9	1.39	1.64	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <p>1. Project expo will be conducted to improve the individual and team spirit.</p> <p>2. Project Courses are conducted to demonstrate abilities as a member in the team</p>			
<p>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.</p>			
PO10	1.43	1.59	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <p>1. Seminar class will be conducted to improve communication skills.</p> <p>2. Soft skill classes will be conducted to communicate effectively on complex engineering activities.</p>			
<p>PO11: Project management and finance: 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>			
PO11	1.33	1.45	Attainment level has been reached. The following actions are made in order to sustain this attainment level.

<p>Actions to be taken:</p> <ol style="list-style-type: none"> In Principles of Management, assignment can be given in the topic "Management by Objective". Final year student projects will be evaluated 			
<p>PO12: Life-long learning: 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>			
PO 12	1.49	1.72	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> In Principles of Management, topic "Leadership Theory" will be taken in PPT. Industrial visits will be arranged for ability to engage in independent and life-long learning 			
<p>PSO1: Competent, creative and imaginative mechanical engineers: Students shall be competent, creative and imaginative mechanical engineers employable in fields of design, research, manufacturing, safety, quality, technical services.</p>			
PSO 1	1.71	1.96	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> Students will be given awareness of modern tools in research. Students will be given awareness of modern materials and manufacturing 			
<p>PSO2: Higher Studies: Students shall be able to progress through advanced degree, certificate programs or participate in continuing education in mechanical engineering, business, and other professionally related fields.</p>			
PSO2	1.47	1.65	Attainment level has been reached. The following actions are made in order to sustain this attainment level.
<p>Actions to be taken:</p> <ol style="list-style-type: none"> Students will be given awareness of advanced certification degree programs in mechanical engineering. 			

POs	Attained Values 2013 – 2017	Attained Values 2012 – 2016	Attained Values 2011 – 2015
1	2.26	2.27	2.09
2	1.99	2.03	1.84

3	1.93	1.88	1.72
4	1.77	1.78	1.60
5	1.66	1.74	1.45
6	1.55	1.62	1.53
7	1.54	1.66	1.51
8	1.62	1.79	1.66
9	1.79	1.84	1.74
10	1.79	1.92	1.66
11	1.67	1.68	1.51
12	1.85	1.93	1.75
PSOs	Attained Values 2013 – 2017	Attained Values 2012 – 2016	Attained Values 2011 – 2015
1	2.14	2.18	1.97
2	1.83	1.87	1.68

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

Academic Audit is conducted by the Internal Quality Audit Cell.

COMMITTEES & RESPONSIBILITIES

S. No.	Assessment Criteria	Frequency	Conduct Mechanism & Action Plan	Implementation and Effectiveness
1	Students Assessment Record Monitoring Committee	Monthly Once	<ol style="list-style-type: none"> 1. Verification of Faculty Dairy for the following: <ol style="list-style-type: none"> a. Attendance Entry b. Class and Series Test Marks c. Syllabus Coverage d. Identification of slow learners and above average performers. e. HOD Authentication. 2. Verification of Assessment & Tutorial Sheets. 3. Checking Course plan and delivery <p>Submission of report to the IQAC in the prescribed format.</p>	Verification of reports by IQAC
2	Test and Retest Monitoring Committee	All Days during Class test, Series test & Retest report after the Corresponding exams	<ol style="list-style-type: none"> 1. Verification of Invigilator Availability in the Examination Hall 2. Collecting Absenteeism Report and record actions taken 4. Monitoring Retest as per Schedule and Timings. 5. Assessment of Question Paper Format and Syllabus Coverage. 6. Submission of report to the Academic Coordinator in the prescribed format. 7. Documenting invigilators list, schedule and timetable 8. Consolidated marks statements 9. List of failures along with the actions taken. <p>Submission of report to the IQAC in the prescribed format.</p>	Verification of reports by IQAC

3	Attendance monitoring	Monthly Once	<ol style="list-style-type: none"> 1. Verification of Master Attendance in Automation once in month. 2. Collecting Long Absenteeism List. 3. Verification of Shortage of Attendance and Issue of warning letters. 4. Collecting Monthly Cumulative Attendance Report. 5. Review of shortage of attendance with HOD& Principal. 6. Submission of report to the IQAC in the prescribed format. <p>Feedback on outcome attainment, Result analysis of internal exams.</p>	Verification of reports by IQAC
4	Course file and lab manual monitoring committee	Once in a Semester	<ol style="list-style-type: none"> 1. Verification of Course files as per NBA Format 2. Verification of lab manuals with additional experiments. (open ended, advanced etc.) <p>Submission of report to the IQAC in the prescribed format.</p>	Verification of reports by IQAC
5	Student Discipline Committee	Monthly once	<ol style="list-style-type: none"> 1. Ensuring maintenance of good student discipline and provide proper amenities for student wellbeing on the campus. 2. Department wise discipline report 3. Event wise discipline report 4. Proper conduction of discipline committee meeting and recording minutes. 	Verification of reports by IQAC

			<ol style="list-style-type: none"> 5. Conducting various college and department level enquires for disciplinary issues and preparing reports. 6. Proper functioning of anti-ragging cell 7. Create awareness among students about the negative effects / disciplinary actions of ragging in the campus <p>Submission of report to the IQAC in the prescribed format</p>	
6	Project monitoring	As per Academic Schedule	<ol style="list-style-type: none"> 1. Verification of All Project Titles and Batch of Students. 2. Verification of all External Projects and their company, progress report 3. Monitoring Student- Guide Contact hours. 4. Submission of report to the Academic Coordinator in the prescribed format. 5. Encourage and help students to convert their project into quality technical articles 6. Compile and catalogue student's research articles. <p>Submission of report to the IQAC in the prescribed format.</p>	Verification of reports by IQAC
7	NPTEL, spoken tutorial & guest lecture monitoring committee	Monthly once	<ol style="list-style-type: none"> 1. Ensure that maximum NPTEL/ Spoken Tutorial resources and included in the program curriculum 2. Keep track of all NPTEL/ Spoken Tutorial activities. 3. Record (Audio/video) and document of all the guest/visiting/Expert lectures conducted in department and arrange required lectures for students as per gaps identified. <p>Submission of report to the IQAC in the prescribed format.</p>	Verification of reports by IQAC

8	Feedback committee	End of semester	<ol style="list-style-type: none"> 1. Should take online faculty feedback and facilities feedback at the beginning and at the end of the semester from the students. 2. Should take employer, alumni feedback and exit surveys whenever necessary. 3. Feedbacks are reviewed with the concerned Heads and Principal to council the faculty in strengthening their performance. 4. Preparation for consolidate department wise report. Submission of report to the IQAC in the prescribed format. 	Verification of reports by IQAC
9	Training & development	Monthly once	<ol style="list-style-type: none"> 1. Organizing Effective Youth Entrepreneurship programs 2. Identification of training and development needs of students. 3. Documenting policies and guidelines regarding In plant training/ Internship for pre-final year students 4. Documenting policies and guidelines regarding Industrial/ Professional Tour 5. Guidance for Higher Studies in India or Abroad 6. Organizing workshops/ seminars on Emotional Intelligence, soft skills etc. 7. Prepare consolidated reports. Submission of report to the IQAC in the prescribed format. 	Verification of reports by IQAC

10	Exam Committee	before and after university examinations	<ol style="list-style-type: none"> 1. Documentation of the following and submission to the IQAC coordinator <ol style="list-style-type: none"> a. Examination notices received from University b. Circulars for students regarding Exam Fee Collection, the last date of fee Collection, modalities of payments of fine c. Examination Time table, Invigilation duty chart, seating plans for the students d. Result analysis e. Disciplinary issues and corrective actions 2. Examination Cell keeps all records pertaining to examinations. 3. Examination Cell staff addresses grievances of administration, faculty, staff and students on all examination related issues. Report any issues and suggestions to IQAC in the prescribed format. 	Verification of reports by IQAC
11	Academic Advisory Committee	Once in 6 months	<ol style="list-style-type: none"> 1. Identifying and checking the major student learning outcomes, identifying appropriate assessment methods/strategies to measure learning outcomes at the program level 2. Monitoring and documenting opportunities provided for students to actively demonstrate their knowledge, skills/abilities, values and development at the program level 	Verification of reports by IQAC

			<ol style="list-style-type: none"> 3. Supervising program level assessment data collection, analysis and interpretation relative to students' ability to achieve the learning objectives 4. Evaluating major student learning outcomes assessment and making recommendation for strengthening major student learning outcomes assessment 5. Devising strategies for using assessment results to improve student learning, courses, programs, and services 6. Ensuring that feedback from program level assessments is provided to students and other stakeholders 7. Ensure that department wise PAC and DAC meetings are scheduled and conducted as per schedule. 8. Monitor department wise CO-PO-PSO mappings and Justification 9. Monitor activities with respect to NBA C2, C3, C7 and C8 attainment, target fixation and gap identification. 	
12	Research & faculty development	Semester wise	<ol style="list-style-type: none"> 1. The Research and Development Committee shall encourage faculty and students to pursue their research plans by submitting research proposal to various agencies and scientific laboratories. 	Verification of reports by IQAC

			<ol style="list-style-type: none"> 2. Allocating funds budgeted by the college for support of research and professional development, shall determine equitable priorities among applications for this support, and shall assure proper accountability in the use of grants. 3. Ensure timely and proper publishing of the biannual research journal Technology and future 4. Establishment and proper functioning of FAB Lab, Project labs etc. 	
13	Library	Once in a semester	<ol style="list-style-type: none"> 1. Recommends instructional hardware and software for library. 2. Recommends any furniture, assistive devices, or other materials that would enhance the quality of the library. 3. Recommends guidelines on materials in all formats for publications, such as bibliographies and instructional materials, tutorials, journals and new materials to HODs for purchasing. 4. Prepares monthly report on library usage (total and department wise). 5. Reviews budget proposals for books, journals, materials and equipment needed to further the library's educational endeavours. 6. Update the books inventory, damaged books inventory and lost books inventory file. Submission of report to the IQAC in the prescribed format. 	Verification of reports by IQAC

14	Students Grievances and Ethics Committee	Monthly Once	<ol style="list-style-type: none"> 1. Provide a platform for students to address their grievances 2. Ensure transparency of the system 3. compile and process the grievances and forward it to the principal 4. Convey the decision from the principal to the concerned students. 5. Collect report form department mentoring in-charges and report for anomalies 6. Conduct classes on professional and academic/ student ethics per semester 7. Ensuring proper students grievances for student wellbeing on the campus. Submission of report to the IQAC in the prescribed format. 	
15	Placement Committee	Once in two months	<ol style="list-style-type: none"> 1. Updating student placement record file. 2. Ensure steps to conduct mock interview and personality tests for the final year students. 3. Conducting various Career Fair 4. Detailed Campus placements activity report for the current academic Year. 5. SWOT analysis of students and taking corrective actions. 6. Conducting various soft skills, aptitude skills and language training sessions. Submission of report to the IQAC in the prescribed format 	Verification of reports by IQAC

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

S.N O.	Name of the Equipment	Name of the Lab.	Date of Procurement	Cost(INR)
01.	Photostat Machine	Office	06-01-2015	1,90,449
02.	Reciprocating sliding attachment for Tribometer	Tribology Lab.	10-06-2015	12,90,000
03.	COMSOL Multiphysics, single user CPU locked license for one computer	Heat transfer Lab.	02-02-2016	2,30,000
04.	Centrifugal Blower test rig.	Thermal Lab.	09-02-2016	51,900
05.	Air conditioning cycle test rig	Thermal Lab.	09-02-2016	72,600
06.	Refrigeration cycle test rig.	Thermal Lab.	09-02-2016	72,600
07.	Cooling tower test rig.	Thermal Lab.	09-02-2016	72,600
08.	Window air conditioning test cut section model	Thermal Lab.	09-02-2016	24,900
09.	Bernoulli's Apparatus	Fluid mechanics Lab.	09-02-2016	30,300
10.	Reynolds Apparatus	Fluid mechanics Lab.	09-02-2016	27,600
11.	Apparatus of Venturimeter/orifice-meter	Fluid mechanics Lab.	09-02-2016	30,300
12.	Losses in pipes Apparatus	Fluid mechanics Lab.	09-02-2016	30,300
13.	Orifice and Mouthpiece Apparatus	Fluid mechanics Lab.	09-02-2016	30,300
14.	Flow Visualization in water channel	Fluid mechanics Lab.	09-02-2016	45,600
15.	Thrust Bearing test rig	Advanced thin film lubrication Lab.	27-02-2016	59,49,721
16.	Thermal conductivity of insulating powder	Heat transfer Lab.	01-07-2017	36,878
17.	Heat pipe demonstrator	Heat transfer Lab.	01-07-2017	36,878
18.	Heat transfer through a composite wall	Heat transfer Lab.	01-07-2017	36,878
19.	Heat transfer through a metal rod.	Heat transfer Lab.	01-07-2017	36,878
20.	Heat transfer in forced convection	Heat transfer Lab.	01-07-2017	40,253
21.	Heat transfer in natural convection	Heat transfer Lab.	01-07-2017	36,878
22.	Shell and tube heat exchanger	Heat transfer Lab.	01-07-2017	74,003
23.	Advanced sensor trained kit	Mechatronics Lab.	02-06-2016	28,500
24.	USB –PC interfacing unit	Mechatronics Lab.	02-06-2016	28,500
25.	LVDT trainer kit	Mechatronics Lab.	02-06-2016	12,000
26.	Accelerometer trainer kit	Mechatronics Lab.	02-06-2016	12,000

27.	Load cell trainer	Mechatronics Lab.	02-06-2016	11,000
28.	Fire gas Analyser for petrol engine	I.C Engine Lab.	28-02-2017	1,75,000
29.	Digital Micrometer	Fluid mechanics Lab.	18-03-2017	43,324
30.	Digital micro-monometer	Fluid mechanics Lab.	18-03-2017	5,08,400
31.	D.C Power supply. ELNOVA	Heat transfer lab.	22-02-2017	72,786
32.	Axial flow fan test rig.	Steam, Heat transfer, and Fluid Labs.	15-02-2016	62,980
33.	Flash forge creator 3D printer	Mechatronics Lab.	19-05-2017	98,810
34.	Pump set with Rooter including Starter	CAD Lab.	09-08-2017	5,80,000
35.	Tank.	CAD Lab.	09-08-2017	1,60,000
36.	Piping.	CAD Lab.	09-08-2017	95,000
37.	Control valves.	CAD Lab.	09-08-2017	1,30,000
38.	Self-priming pumping unit.	CAD Lab.	09-08-2017	1,60,000
39.	Agitator assembly.	CAD Lab.	09-08-2017	90,000
40.	Main control panel.	CAD Lab.	09-08-2017	60,000
41.	Minimum Quantity Lubrication system.	Tribology lab.	13-10-2017	1,78,250
42.	Portable surface roughness tester.	Tribology lab.	13-10-2017	1,88,220
43.	Digital portable hardness tester.	Tribology lab.	13-10-2017	77,553
44.	Digital Oscillator.	Mechatronics Lab.	09-11-2017	98,550
45.	Pressure Transmitter.	Turbine Erosion Testing Lab.	08-01-2018	29,355
46.	RPM Meter with Display and Transmitter.	Turbine Erosion Testing Lab.	08-01-2018	1,24,630
47.	Magnetic Flow meter.	Turbine Erosion Testing Lab.	08-01-2018	1,84,370
48.	Vibration Sensor Transmitter.	Turbine Erosion Testing Lab.	08-01-2018	1,55,530
49.	PLC Panel.	Turbine Erosion Testing Lab.	08-01-2018	4,63,500
50.	Experimental Test Rig for performance test with S1 loading arrangement. (3-cylinder, 4-stroke petrol engine test set up computer based.)	I.C engine Lab.	08-11-2017	9,67,680
51.	Experimental Test Rig for performance test with mechanical CI loading arrangement. (Single cylinder 4-stroke variable compression ratio Diesel engine test set up computer based).	I.C engine lab.	08-11-2017	8,37,800

52.	Slurry erosive Wear tester.	Dynamics Lab.	17-05-2017	7,49,250
53	Micro hardness Tester	Tribology Lab	03-06-2015	21,69,232
54	Statistics based software	Industrial Lab	18-08-2015	5,68,530
55	Data Acquisition System	Heat Transfer Lab	05-04-2016	19,65,313
56	Data Acquisition System	Heat Transfer Lab	11-05-2016	33,50,000
57	Boron nitride cutting inserts Cutting Fluid	Tribology Lab	02-01-2017	3,49,258
58	Ansys Academic CFD software	CAD Lab	04-01-2017	15,79,200
59	Tungsten Carbide inserts Al-Oxide Ceramic inserts	Tribology Lab	13-03-2017	94,176
60	Structural Mechanics Module Heat Transfer module CFD Module Comsol Multiphysics	Heat Transfer Lab	05-04-2017	5,98,920
61	Online UPS 180 VDS with accessories	Fluid and Heat Transfer Lab	27-06-2017	7,71,132
62	Fatigue Testing Machine (LFV Type) [-150 to 600°C) Impact Tester	Advanced strength materials lab	30-11-2017	1,92,63,546
63	UTM (-70 to 1000°C operating temp)	Advanced strength materials lab	31-03-18	99,12,652
64	Torsion tester	Advanced strength materials lab	12-04-18	46,86,946
65	Brinell/Rockwell Hardness Tester	Advanced strength materials lab	31-03-2018	7,97,778
66	Micro Vicker Hardness Tester	Advanced strength materials	31-03-2018	13,96,112
67	Video Gauge	Advanced strength materials	25-09-2017	51,02,599
Total Amount (INR)				6,74,36,198

7.3 Improvement in Placement and Higher Studies

(10)

S. No.	Year	Numbers	Quality Placements	Core Industry Placements	Pay Packages
1	2015	57	20	07	4.5 to 10
2	2016	69	24	05	4.5 to 12.5
3	2017	48	10	12	4.8 to 7.95 LPA

Higher Studies:

S. No.	Year	B. Tech to M.Tech.	M.Tech. To PhD	PhD in Premier Institutions
1.	2015	28	15	0
2.	2016	34	15	0
3.	2017	24	16	02

Entrepreneurs:

S. No.	Year	B. Tech Qualified Based	M.Tech. Qualified Based	PhD Awarded Based
1.	2015	27	-	-
2.	2016	25	-	-
3.	2017	31	-	-

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

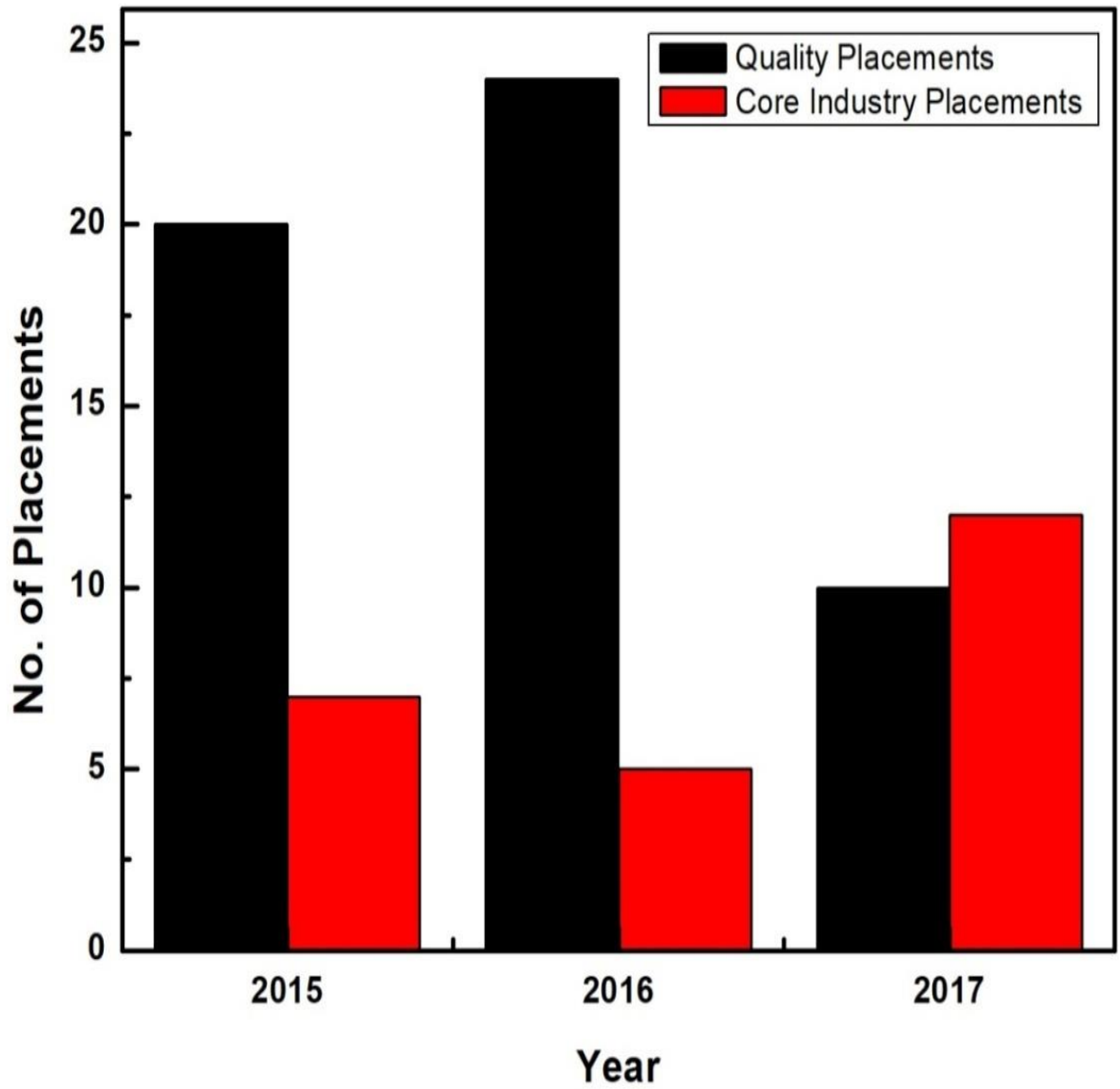
Assessment is based on improvements in terms of ranks/score in GATE examination.

Based on Range of GATE Rank/Score Highest and Minimum:

S. No.	Degree	Year 2015		Year 2016		Year 2017	
		High	Min	High	Min	High	Min
1	M.Tech. MSD Admissions	602	254	577	356	608	283
2	M.Tech. ITMM Admissions	572	247	513	312	578	278
3	PhD Admissions	150	15	92	06	150	20

Improvement in Quality of paper publication (10)

S. No	Year	National Conferences	International Conferences	National Journals	International Journals
1	2015	0	11	0	19
2	2016	0	16	0	19
3	2017	26	63	0	46



CRITERION 8	FIRST YEAR ACADEMICS	50
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8. FIRST YEAR ACADEMICS

(50)

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		

TableB.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 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
Y				
CAY m_1	20	43	45.66	5
CAY m_2	20	42	45.66	5
Average Assessment				5

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)) \times (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 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 of 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 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 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

Course outcomes of all courses are assessed with the help of assessment tools mentioned in above Table and attainment level is evaluated based on set attainment rubrics as per Table given below. If the average attainment of a particular course for three consecutive years is greater than 80% of the maximum attainment value (i.e. 80% of 3 = 2.4), then for that particular course the current rubrics for attainment must be changed to analyses continuous improvement.

Attainment Levels of COs

Assessment Methods	Attainment Levels	
	Internal	Level 1
Level 2		60% of students scoring more than 50% marks in
Level 3		70% of students scoring more than 50% marks in

University	Level 1	50% of students scoring more than 50% marks in
	Level 2	60% of students scoring more than 50% marks in
	Level 3	70% of students scoring more than 50% marks in

(ii) CO Attainment Calculation of a Course:

Assessment tool of Computer fundamentals for batch 2013 - 17

Assessment Tool	CIT101.1	CIT101.2	CIT101.3	CIT101.4
Assignment 1	3	3	-	-
Assignment 2	-	-	-	-

Mid-Term Exam	3	3	-	-
Optional Tests (Make up tests/ Re-tests)	-	-	-	-
Internal Attainment	3	3	-	-
End-Term Exam	3	3	3	3
Total Attainment	3	3	1.8	1.8
Overall CO attainment	2.4			

Assessment tool of Computer Fundamentals Lab for batch 2013 - 17

Assessment Tool	CIT102.1	CIT102.2	CIT102.3	CIT102.4	CIT102.5
Daily Evaluation	3	2	2	3	-
End-Term Exam	3	3	3	3	3
Total Attainment	3	2.5	2.5	3	1.5
Overall CO Attainment	2.5				

(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 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)

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 target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the University examination)

Table 8.4.2.2 CO attainment of all courses

Course	CAY	CAY m1	CAY m2
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	2.78	2.82	2.56
PHY 201	2.51	2.47	2.52
PHY 202	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

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

(10)

(Describe the assessment processes that demonstrate the degree to which the Program Outcomes are attained through first year courses and document the attainment levels. Also include information on assessment processes used to gather 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:

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

PO ASSESSMENT TOOLS AND PROCESSES						
Direct (80% weightage)	CO Assessment	Course Type		Assessment Methods	Frequency	
		Theory	Internal Test			
				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		
			First Review	Once per course		
			Second Review	Once per course		
			Final Review	Once per course		

		Project	Phase II		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

(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 outcome 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- 2016-17

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	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	1.06	0.5	2.5	1.	1.6	1.46						
CSE	2.4	2.4	2.4	2.	2.3	0.8	0.8		0.8	0.8	1.85	2.4
CSE	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

CAYm1- 2015-16

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MTH	2.7	2.75	2.68	2.70	2.2							
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	2.8	0.7		0.6	0.8	0.7	0.	1.8	0.8	0.7	0.	2.8
PHY	2.5	1.93		0.6					1	-	-	2
PHY	2.6	2.82						2.	1	1	1	1
PHY	2.4	1.9		0.6					-	-	1	2
PHY	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		1.2	0.4		0.4	0.4						
CHM		0.76	0.2		0.2	0.2						
CHM			0.3				0.					1.2
CHM	1.31	1.31	0.9			1.3	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

CAY m2- 2014-15

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
MTH10	2.6		2.75	2.29	2.3							
MTH	2.7	2.	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	0.9	1.12
MEC	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	2.4			0.								
PHY	2.7	2.78						2.75				
PHY	2.5	1.		0.6								
PHY	2.8	2.7		-				2.75				
IT 101	1		1.5	0.	0.7	0.75			0.45			

IT 102 P	1.2	0.6	3	1.	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		0.95	0.4		0.4	0.4						
CHM		0.75	0.2		0.2	0.2						
CHM			0.3				0.8					1.26
CHM	1.31	1.31	0.9			1.3	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

8.5.2. Actions taken based on the results of evaluation of relevant POs and PSOs (10)

(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 (CAY 2016-2017)

PO	Target Level	Attainment Level	Observations
PO1	Engineering Knowledge		
PO1	1.76	1.77	TARGET LEVEL ATTAINED. 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.
Action Taken			
1. ICT enabled teaching.			
2. Conducted problem oriented tutorial classes.			
PO2	Problem Analysis		
PO2	1.54	1.51	TARGET LEVEL 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 well 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

Action Taken			
<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>TARGET LEVEL ATTAINED.</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>
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	0.84	<p>TARGET LEVEL NOT ATTAINED</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 class room 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>
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 activities 			
PO5	Modern Tool Usage		

PO5	1.10	0.80	<p>TARGET LEVEL ATTAINED</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>TARGET LEVEL 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 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>TARGET LEVEL NOT ATTAINED</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		
			<p>TARGET LEVEL ATTAINED</p> <p>Students were given training on ethics</p> <p>Instructions were given to the student regarding the professional ethics to be followed</p>
PO9	Individual and Team Work		

			TARGET LEVEL ATTAINED Lab sessions were conducted as individual / team work The social service activities are completed in teams
PO10	Communication		
PO10	0.66	0.67	TARGET LEVEL ATTAINED Students were given training on communication skills
PO11	Project Management and Finance		
PO11	0.57	0.59	TARGET LEVEL ATTAINED 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	TARGET LEVEL ATTAINED Made the students aware about the need, to prepare and to engage in independent and lifelong learning in various engineering streams

POs Attainment Levels and Actions for Improvement (CAY m1 2015-2016)

PO	Target Level	Attainment Level	Observations
PO1	Engineering Knowledge		

PO1	1.76	1.68	TARGET LEVEL NOT ATTAINED. Since students have basic background in subjects like Mathematics and Engineering Sciences the performance in the mid-term and end examination was pretty good. However CHM 202 P, IT 102 P and
Action Taken 1. ICT enabled teaching. 2. Conducted problem oriented tutorial classes 3. Remedial classes for weaker students			
PO2	Problem Analysis		
PO2	1.54	1.45	TARGET LEVEL 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 and IT 102 P have not attained the target level
Action Taken 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	TARGET LEVEL ATTAINED. 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
Action Taken Practiced designing solutions of the engineering problems in the class room hours Exposure to professional approach in solving complex problems ICT enabled teaching			
PO4	Conduct Investigations of Complex Problems		

PO4	1.27	0.74	<p>TARGET LEVEL NOT ATTAINED</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>Since the syllabus is concentrated more on problem analysis, the class room sessions helped the students in conducting investigations of complex engineering problems. However HU 101, MEC 201, PHY 101, PHY 201, IT 101 and IT 102 have not attained the target level</p>
<p>Action Taken</p> <p>ICT enabled teaching</p> <p>Expert lectures</p> <p>Conducted Technical events as part of Technical Fest & other professional body activities</p>			
PO5	Modern Tool Usage		
PO5	1.10	0.75	<p>TARGET LEVEL NOT ATTAINED</p> <p>Exposure to various training sessions boosted the exposure to usage of modern tools in the engineering streams.</p> <p>However MEC 201, CHM 201T 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	0.59	<p>TARGET LEVEL 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.</p> <p>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	TARGET LEVEL ATTAINED The sustainable engineering practices were included in the syllabus which enabled the students to learn more about the Environment and sustainability
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	TARGET LEVEL ATTAINED 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			
<ol style="list-style-type: none"> 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	TARGET LEVEL ATTAINED Lab sessions were conducted as individual / team work The social service activities are completed in teams
Action Taken			
<ol style="list-style-type: none"> 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	TARGET LEVEL ATTAINED Students were given training on communication skills

Action Taken			
<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 4. Training on life skills 			
PO11	Project Management and Finance		
PO11	0.57	0.59	<p>TARGET LEVEL ATTAINED</p> <p>Understanding and demonstrating management principles and applying to own works enable students to get exposed to Project management</p>
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. In technical management responsibility given to students in various technical events 			
PO12	Lifelong Learning		
PO12	0.57	0.92	<p>TARGET LEVEL ATTAINED</p> <p>Made the students aware about the need, to prepare and to engage in independent and lifelong learning in various engineering streams</p>
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 (CAY M2 2014-2015)

PO	Target Level	Attainment Level	Observations
PO1	Engineering Knowledge		
PO1	1.76	1.65	<p>TARGET LEVEL NOT ATTAINED.</p> <p>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</p>
Action Taken			
<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		

			TARGET LEVEL NOT ATTAINED
PO2	1.54	1.39	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 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
Action Taken			
<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		
			TARGET LEVEL ATTAINED
PO3	0.95	0.99	The tutorial hours conducted for all subjects have 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
Action Taken			
<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		
			TARGET LEVEL NOT ATTAINED
PO4	1.27	0.81	Since the syllabus is concentrated more on problem analysis, the class room 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			
<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	0.72	TARGET LEVEL 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			
<ol style="list-style-type: none"> 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	TARGET LEVEL 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	TARGET LEVEL ATTAINED The sustainable engineering practices were given which enabled the students to learn more about the Environment and sustainability
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	0.46	TARGET LEVEL ATTAINED
			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			
<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	TARGET LEVEL ATTAINED Lab sessions were conducted as individual / team work
Action Taken			
<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	TARGET LEVEL ATTAINED Students were given training on communication skills
Action Taken			
<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	TARGET LEVEL ATTAINED 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. 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	TARGET LEVEL ATTAINED Recognize the need for, and have preparation and ability to engage in independent and lifelong 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 3. Expert lectures 			

CRITERION 9	Student Support Systems	50
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9.1 Mentoring System to Help at Individual Level (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.

□ **Course work:**

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 gray 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

➤ Student 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 Redressal 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 / Counseling 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.

➤ **Center 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 instill 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

carrier. Our faculty and students are invited by these schools to have a strong bond of belonging and Big Brother relation.

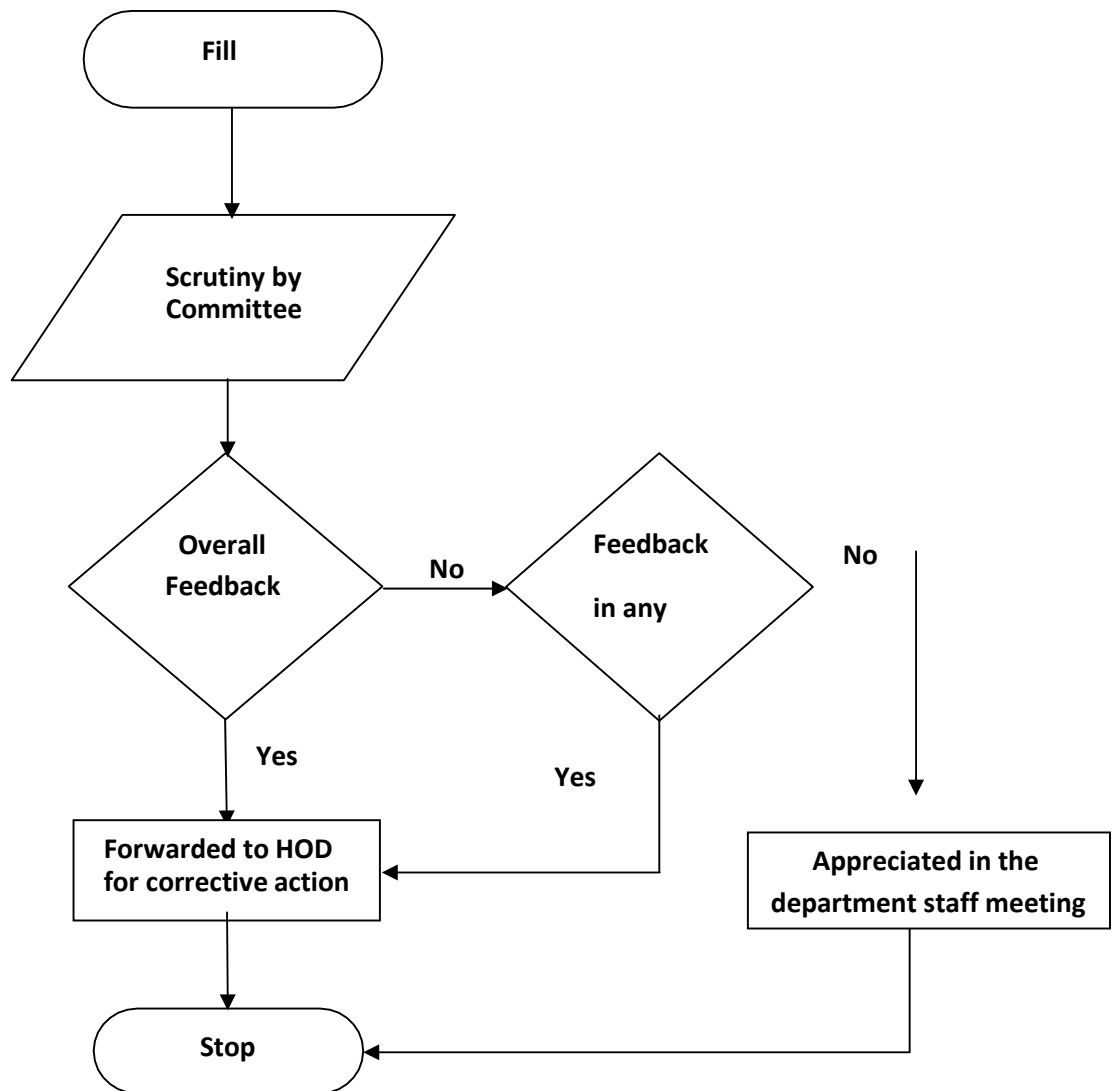
9.2 Feedback analysis and reward / Corrective measures taken, if any (10)

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 in to 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

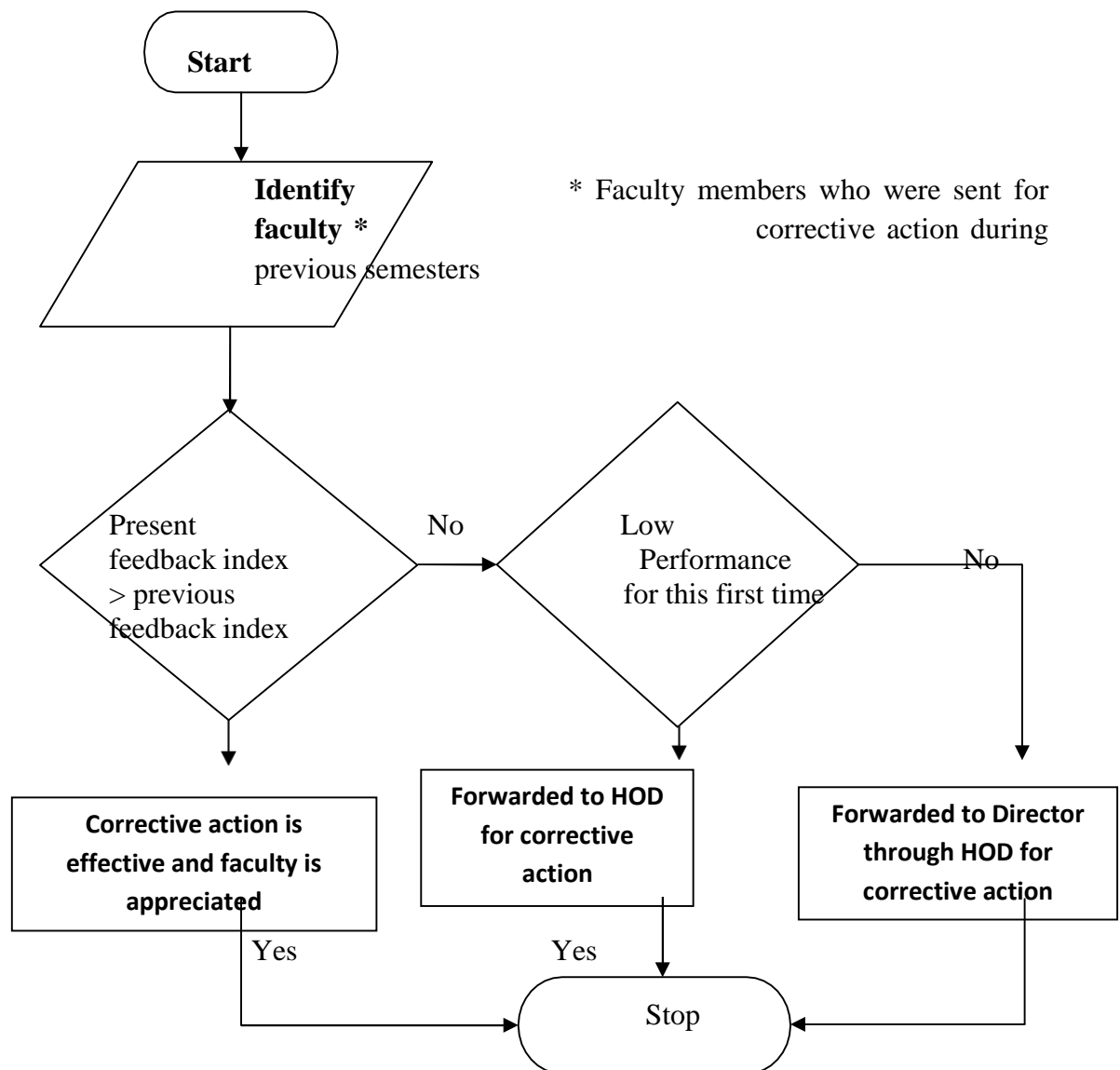
No.	Item	Response
1	Feedback collected for all courses	YES
2	Specify the feedback collection Process	One regular class hour is designated for the purpose.
3	Who collects the feedback	Faculty members in charge of Student Feedback
4	When feedback is collected	Around 12 weeks after semester commences
5	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.

Flowchart for feedback analysis process for faculty members

**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



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 includes, 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 insource. 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

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

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

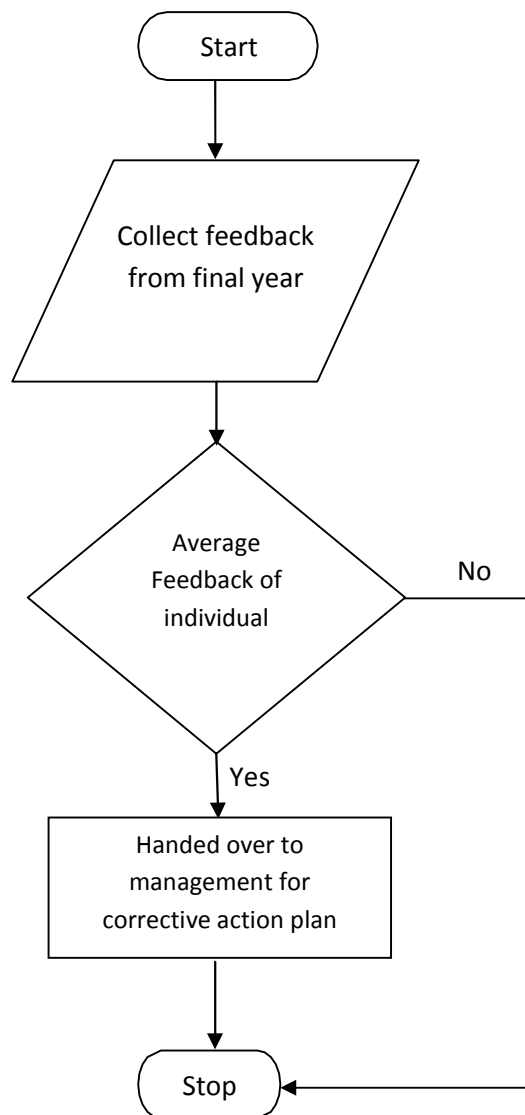
OTHERS [tick mark in the relevant cell]

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

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 Exp. and for days on which students were absent	Excellent	Good	Average

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**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 Padshahi 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 been procured i.e. lockers, beds and tables to facilitate the students with requisite furniture to make their stay in the hostel comfortable.
	iii) Wifi/LAN	Each block/wing of the hostel has been connected with wifi/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 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 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.
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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	Dawood Ibrahim Ali (Technical Asstt)

			Shah(Tech.) Mohammad Ramzan(Tech.)	
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 Tenon Machine 1 No's Grinder 1 No's Thickness Planner 1 No's	Showkat Ahmad(Tech.) Noor Mohammad(Tech.) Mohd. Yousuf(Tech.)	MuzafarShah (Technical Assistant)

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
02	Ambulance (Maruati)	02 Nos		Ahmad
03	Staff Car (Ambassador)	01 No		

04	Mini Loader (Truck)	01 No	Mr Khazir Mohammad (Tech Asst)	(Driver)
05	Fortuner Car (Toyota)	01 No		Mr Reyaz Ahmad (Driver)
06	Innova Car (Toyota)	01 No		Mr Shabir Ahmad (Driver)
07	Scorpio Car (Mahindra)	01 No		Mr Sheraz Ahmad (Driver)
			Mr Mohd Ayoub (Driver)	Mr Mohammad Yaseen (Conductor)

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 guide suggestion. 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	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
		1	Communication Systems Laboratory
		2	Microprocessor Laboratory

ECE	10	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
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

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.



Fig: - Central Library

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
	MBA	5572	2678
TOTAL		39724	10587

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
1. DELNET (Developing Library Network)
 2. National Digital Library

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

Journals

The Library receives 106 Printed Journals, Technical Magazines, News Papers and the library provides IP enabled access to a large number of full text 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
		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

CSE	National/ International	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
ECE	National/ International	1. Indian Journal of Electronic and Electrical Engineering
		2. Advances in Wireless and Mobile Communication
		3. Journal of Microwaves, Science and Technology
		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.
		8. 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

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,

b). 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 are organized.

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 provides need-based programs on software 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
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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				

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

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.

Activities from Student Welfare Cell for Career Guidance and Counseling

Career Guidance and Counseling is a comprehensive, developmental program designed to assist students in making and implementing informed educational and occupational choices. A 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 behavior 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 counseling 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

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 a 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. A

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 Center

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 Center
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 Center, NIT Srinagar	27	HEAD, IIED Centre
07	Oct 2, 2017	IDEA CHALLENGE 2017 – “The	IIED Centre	1000+	IIEDC Team 9with prize money worth 30,000 distributed to

	(MEGA EVENT)	Future World”			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, Automation and IT industries”	CETPA Infotech. Pvt. Ltd.	540+	Shriyansh Rahul Kumar
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

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 centers 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 centers 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

Faculty profile for Physical Education

1. Name: Dr. S.K. Bukhari

Email: kaiser@gmail.com

2. Name: Ms. K. A. Mir

mail: kowsaralimir@gmail.com

Designation: SAS Officer

Inter-Semester Sports Meet: The Institute organizes the Biannual 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, Carrom, Hockey, Table tennis and Athletics 100 meter, 200 meter 400 meter, 800 meter race, high jump, long jump, shot put, etc are conducted.



Fig:-Inter-Semester Sports Meet

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 Equipment)	Indoor
9	Gymnasium (Girls)	13 m x 7 m	Indoor
10	Cricket	Hard Pitch	Outdoor

Sports Events Conducted/ participated/ in and outside NIT Srinagar from 1st January 2015 up to 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 (Boys and Girls)	NIT Srinagar (June 2016)	Participation by all 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	Jammu University (April 2018)	Winner in Table tennis 3 rd place in badminton

(Boys) Badminton (Boys) and Table tennis (Boys).	3 rd place in cricket
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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.	Hemoglobin Derive for females	
06.	Techvaganza	
07.	Mental Health Day	
08.	Yoga Day	
09.	Cleanliness Drive (Swachh Bharat Abhiyan)	
10.	Alumni Meet	
11.	Fresher's Day/Orientation Programme	
12.	Farewell	2017-2018
13.	Induction Programme	
14.	Stress Management	2017-2018
15.	Passport Mela	2017-2018
16.	Musical Concert (Ustad Kamal Sabri)	2017-2018

CRITERION 10	Faculty/non-teaching Recruitment Rules	120
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10.1 Organization, Governance and Transparency (55 marks)

10.1.1 Availability of the Vision & Vision statement of the Institute: (05 marks)

A.

- **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 marks)

The institute has prepared Vision Document for 15 years up to 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 marks)

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
Member-Secretary	Section 18 Clause (2)	Dr. Nisar Ahmad Mir, Registrar,NIT, Srinagar.

FINANCE COMMITTEE:

<u>Chairman</u>		Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<u>Members:</u> 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.

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	<u>FILED OF HUMANITIES:</u> Prof. Mehraj-ud-Din, Vice-Chancellor, Central University of Kashmir, Srinagar (J&K)
	2	<u>FIELD OF ENGINEERING:</u> Prof. A. K. Jain, Professor, Civil Engineering, Indian Institute of Technology, Hauz Khas, New Delhi
	3	<u>FIELD OF SCIENCE:</u> 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, Co-ordinator 1 st & 2 nd Semester, Chairman Library Committee, Librarian and DPE.
Secretary		Dr. Nisar Ahmad Mir, Registrar, NIT, Srinagar

BUILDING AND WORKS COMMITTEE

Chairman		Prof. Rakesh Sehgal Director, National Institute of Technology Srinagar, Hazratbal, Kashmir-190006
<u>Members:</u> 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	Mr. N. K. Bansal Superintendent Engineer (Civil), CPWD, Chandigarh.
	2	Dr. B. A. Mir, Associate Dean, P&D, NIT Srinagar
	3	Shri Rajiv Sao, Superintendent Engineer, CPWD Chandigarh
	4	Executive Engineer (Civil), CPWD, Srinagar.
	5	Er. Muneeb Ahmad, Executive Engineer, Electric Division 4th Srinagar.
Secretary		Dr. Nisar Ahmad Mir, Registrar, NIT, Srinagar.

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 • 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 posers 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,

	<p>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</p> <ul style="list-style-type: none"> • 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 the Institute • 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

	<p>matters connected with the working of the Departments or Centres</p> <ul style="list-style-type: none"> • appoint Committees from amongst the members of the Senate, other Teachers of the Institute and 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 activity within the Institute and seek reports on such research or academic development or activity from the persons engaged therein • 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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Frequency, participations details of external members and attendance of Board of Governors, Finance Committee, Building and Works Committee and Senate:

Sl.	Date of meetings	Academic Year	No. of participants (external members)	Total No. of participants
<u>Board of Governors:</u>				
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
<u>Finance Committee:</u>				
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
<u>Building and Works Committee:</u>				
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
<u>Senate:</u>				
1	27-12-2017	2017-18	01	42

2	31-12-2016	2016-17	03	42
3	08-04-2016	2016-17	01	42

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 equipment 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 apprised 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.												
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	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: <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.	Proposal to be placed in the next BOG meeting.												

14/96	
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 apprised 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.

**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 up to 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. 05/95	The BOG advised to refer the matter for legal opinion and take a decision 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 onetime 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 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 are Approved. Minutes of the FC are attached.

**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 01/94	No.	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 were 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 02/94	No.	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 03/94	No.	Report recorded.
BOG-94/04		To consider modifications in the NIT Statutes.
Resolution 04/94	No.	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		To consider handing over charge of In-charge Registrar to Prof.

agenda BOG-94/05	M. S. Mir.
Resolution No. 05/94	<p>Chairman, BOG introduced and asked for distribution of supplementary agenda- handing over charge of Incharge 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 the 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 handing over of the charge to Prof. M. S. Mir and implementation of the Chairman's order to that effect immediately.</p>

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 BOG-93/02	To consider the resumption of the class work for autumn session 2016 in the wake of situation in the Kashmir valley.

Resolution No. 02/93	<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>
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.
BOG-93/04	To record report regarding the creation of Delhi Chapter of NIT Srinagar Alumni.
Resolution No. 04/93	Report recorded.
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 05/93	The items were deferred.
BOG-93/07	To consider providing of Ph.D. scholarship to registered DRFs / SRFs of the Institute up to 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.

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, New Delhi.

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 <u>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).</u></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 Harmain, 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 <u>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).</u></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 Selection Committee met at the appropriate time".</i></p> <p>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</p>

	<p>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 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.</p> <p>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> <p>3 <u>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).</u></p> <p>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>4 <u>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).</u></p> <p>The BOG did not accept the recommendation.</p> <p>5 <u>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</u></p>
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	<p><u>service and seniority benefits.</u></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 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.</p> <p>6 <u>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.</u></p> <p>BOG accepted recommendations in these cases as-well since these are of similar nature as GR-11.</p> <p>7 <u>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.</u></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>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> <p>The BOG did not accept the recommendation.</p>
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	<p>9 <u>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.</u></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 <u>GR-18 regarding <i>counting of service rendered abroad.</i></u></p> <p>The matter was discussed and the BOG did not accept the Plea of concerned Faculty Members.</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 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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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 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.
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 fulfilment of qualification as prescribed by the UGC.</p> <p>c) As per UGC notification 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	<p>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> <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 be used for interaction by the administration periodically for a review of the activities and issues. This should be done at least twice in one semester.</p> <p>A lunch or dinner be 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</p>

	<p>month. They may take along with one or more other faculty members who are not associated with that class. 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 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	The Director, Prof. Rajat Gupta presented the action taken in respect of this item as detailed below:

Sr.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 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.
The BOG advised that periodic reviews must be made on these issues and students taken into confidence about these during interactions.				

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.

BO G-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.				
BO G-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.				
Serial	Meeting No. & Date	Agenda item No.	Resolution	Action 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 to take necessary steps for implementing suggestions of the external review report.	Necessary steps have been initiated.	A quantified report of the action taken be submitted in next meeting of the BOG.
2	90th 30-12-2015	1	During the presentation by Dean P&D, it was revealed that at present as per LAWDA		It was noted that permission

		<p>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-principal approval for the following two works as G+5 structures through CPWD subject to the permission by the concerned authorities:</p> <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/-. <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>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 granted very soon. It was advised that the grant of permission for G+5 from the concerned authorities needs to be pursued vigorously.</p>
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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.
BO G-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.				
Res olution 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.				
BO G-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.				
Res olution No. 04/91	Report recorded.				
BO G-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.				
Res olution 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.				
BO G-91/06	To consider the recommendations of the constituted Committee with regard to leave entitlement to Adjunct Faculty in the Institute.				
Res	Since adjunct faculty is not a regular staff, earned leave is not				

olution No. 06/91	admissible.
BO G-91/07	To consider the report of the committee constituted to examine the case of Dr. G. R. Khan.
Res olution 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 consideration.
BO G-91/08	To consider the two orders of Hon'ble High Court of J&K in matters related to Career Advancement Scheme (CAS).
Res olution 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.
BO G-91/09	To consider the issues discussed in the brainstorming session held on 10-04-2016 for appropriate advice and orders.
	Item withdrawn.
BO G-91/10	To consider termination of service as Technical Resignation in favor of Prof. R. K. Wanchoo, former Director of the Institute.
Res olution No. 10/91	It was decided to refer the matter to MHRD.
BO G-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.
Res olution 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.
BO G-91/12	To consider the recommendations of the Senate made at its meeting held on 08-04-2016 in the NIT Srinagar, Hazratbal Kashmir.
Res olution 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.

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,
Safdarjung 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 along with 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. 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.
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	Ratified.

No. 07/90	
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 / 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 require 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.
BOG-90/10	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.
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	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>Based on these facts the BOG:</p> <p>a) granted in-principal approval for the following two works as G+5 structures through CPWD subject to the permission by the concerned authorities:</p> <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/-. <p>b) In case the permission or 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 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-letter 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

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	Minutes Confirmed with the change that the words, 'so called' be replaced by 'as	

	<p>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.</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 up to 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 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 Sr.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.	Offer Letter issued. 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	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-

	<p>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.</p> <p>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/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>	01-2018. The decision from MHRD is yet awaited.
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.

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	
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	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 BOG-93/02	To consider the resumption of the class work for autumn session 2016 in the wake of situation in the Kashmir valley.	
Resolution No. 02/93	<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 i.e. 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</p>	Implemented.

	available to the students through e-mail / phone / institute website for guiding them and offering clarification etc. for their assigned subjects. Further instructions and information from time to time will be conveyed through institute website.	
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.

Adjourned meeting dated 13-10-2017

Item No. BOG-93/05	To consider recommendation of Grievance Committee for faculty.	
Resolution No. 05/93	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	

	<p>recommendations of the Faculty Grievance Committee and the following was resolved:</p> <p>1 <u>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).</u></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 favor 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>Case is returned to Grievance Committee, its report is awaited</p>
	<p>2 <u>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).</u></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</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</p>

	<p>more and which reads as under: <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 Selection Committee met at the appropriate time"</i>.</p> <p>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 2013as these</p>	<p>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. 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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	<p>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 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.</p> <p>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>	
	<p>3 <u>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).</u></p> <p>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. In light of above, it was decided to put the new facts before the Board of Governors again for</p>

		their consideration and approval for allowing correcting and refixing dates of eligibility of faculty members.	
	4	<p><u>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).</u></p> <p>The BOG did not accept the recommendation.</p>	No action called for.
	5	<p><u>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.</u></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><u>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.</u></p> <p>BOG accepted recommendations</p>	Concurrence of MHRD is being sought.

		in these cases as-well since these are of similar nature as GR-11.	
	7	<p><u>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.</u></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>	Item will be put up in the next BOG meeting.
	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>	No action called for.
	9	<p><u>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.</u></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</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. In light of above, it was decided to put the new facts before the</p>

	<p>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>Board of Governors again for their consideration and approval for allowing correcting and refixing dates of eligibility of faculty members.</p>
	<p>10 <u>GR-18 regarding counting of service rendered abroad.</u> 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 for consideration of the Council through its Standing Committee. During the discussions Board was informed that the earlier recruitments have been made as</p>	<p>In view of final revised RR's no action called for.</p>

	<p>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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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, 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	Record reported.	No action called for.

No. 02/92		
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 notification 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	It was planned to implement these decisions from autumn 2016 session

	<p>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: 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 at least twice in one semester. A lunch or dinner be arranged once in each semester where students and faculty would be together. The HODs must organize an interaction with the students of each class once in a month. They may take along with one or more other faculty members who are not associated with that class. Saturdays must be utilized in curricular activities through clubs and departments. Sports activities should be increased. 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. They must also record that he has received back the Minor exam scripts. 8. Heads of the Departments must ensure that lower semesters are taught by senior faculty members. 9. A booklet containing hostel rules and regulations and 	<p>which has unfortunately got delayed due to the situation in the valley.</p>
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	<p>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 behavioral 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 15th may, 2016.</td> <td>Report already submitted and considered by BOG.</td> <td>Orders are recorded in item no. BOG-92/06.</td> </tr> <tr> <td>2</td> <td>BOG to consider the</td> <td>Considered by BOG on 03-06-</td> <td>Orders are recorded in</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 15th may, 2016.	Report already submitted and considered by BOG.	Orders are recorded in item no. BOG-92/06.	2	BOG to consider the	Considered by BOG on 03-06-	Orders are recorded in	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 15th may, 2016.	Report already submitted and considered by BOG.	Orders are recorded in item no. BOG-92/06.											
2	BOG to consider the	Considered by BOG on 03-06-	Orders are recorded in											

		report and formation of students council and its modalities.	2016.	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	Reimbursement made on all claims.	Record reported.	

		reimbursed.			
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>					

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: <ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 91st 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 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	The Grievance Committee for faculty has met twice recently and is scheduled again in June 2016 to give its final report.

	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.	
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.

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 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.	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 along with 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 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.	Needful done. 08 Trainee Teachers have joined IIT Delhi w.e.f. January 2016, after completion of the formalities.
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.	The proposal along with the report of the Committee has been approved by the Chairman, BOG and implemented accordingly.

	<p>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 staff from Personnel Department of the Institute require 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	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	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	LAWDA has granted permission for G+2 structures at present but also intimated that as per revised Master Plan of Srinagar city, G+5

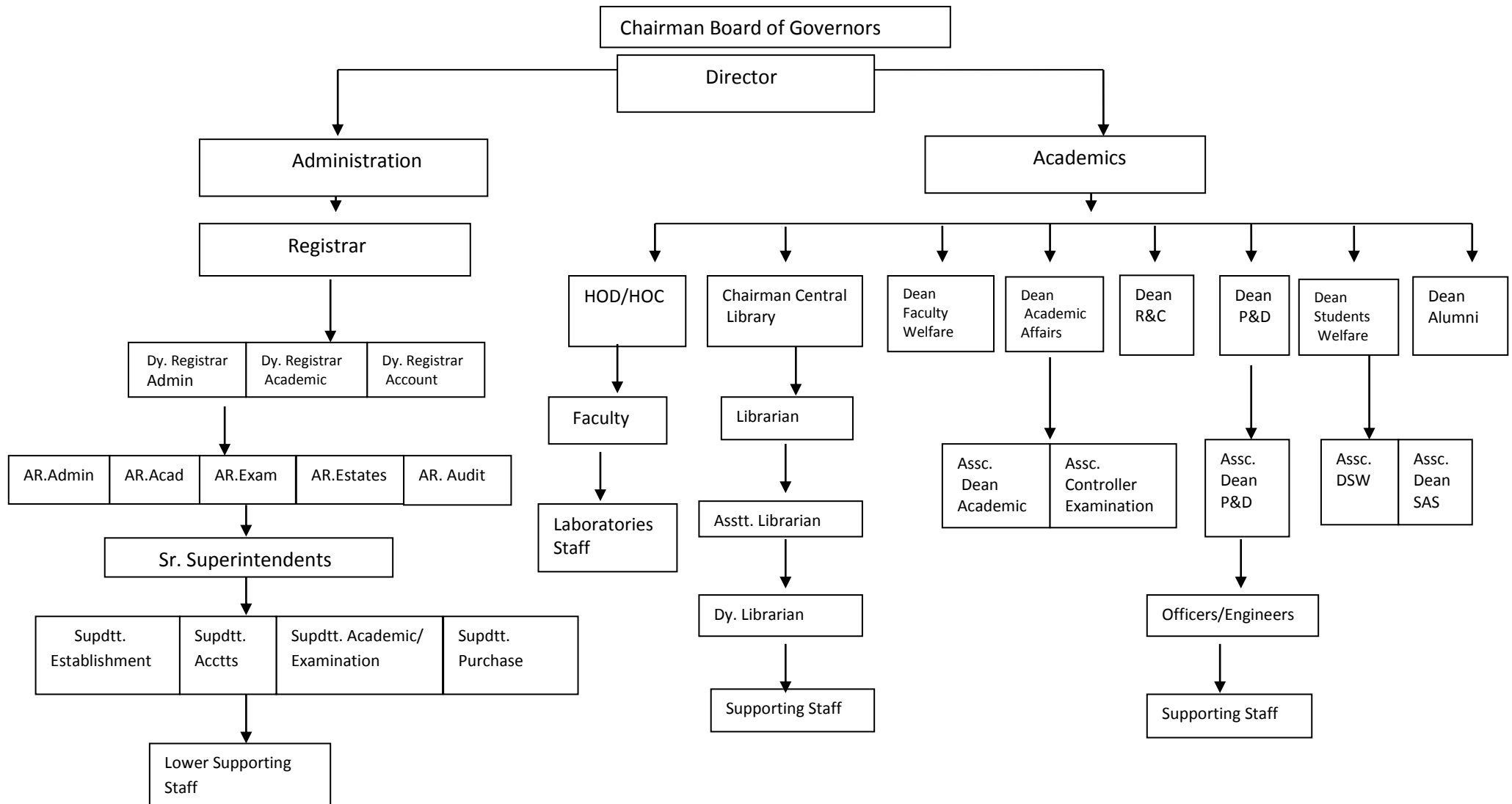
	<p>the proposals of the Institute prepared by CPWD are for G+5 blocks. It was further informed that the Government of J&K Town Planning Department is working on the revised Master Plan of Srinagar City wherein a provision for permission for G+5 type structures is envisaged.</p> <p>Based on these facts 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. 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 proposal 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>	<p>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>
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-letter may be printed by the Centre for this purpose in addition to other mediums of publicity.</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>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>Mechanical Engineering oriented activities Chemical Engineering oriented activities Civil Engineering oriented activities Electronics & Comm. Engineering oriented activities Electrical Engineering oriented activities Information Technology oriented activities</p>	
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10.1.4. Decentralization in working and grievance Redressal mechanism: (05 marks)

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 B. Mechanism and Composition of Grievance Redressal 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

(05 marks)

The Accounts of the Institute are in the name of Director. He is empowered to sanction the requisite amount of money/ proposes up to 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/centres.

10.1.6. Transparency and Availability of Correct Information in Public Domain:

(05

marks)

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

marks)

10.2.1. Quantum of Budget Allocation for Three Years

(5)

(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	

10.2.2 Utilization of Allocated Funds:

(05

marks)

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%

The Funds allocated have been well utilized for:

- Developing lab facilities.

- Additional labs were setup.
- New equipment was added to different labs.
- Library and Internet facilities were improved.
- Maintenance of workshop and lab equipment.
- Training programs for faculty members and non-teaching staffs.
- Extracurricular activities of students.

10.2.3. Availability of Audited Statements on the Institute Website. (05 marks)

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 marks)

10.3.1. (A) Quantum of Budget Allocation for Three Years.

(10)

(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	

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	33500000.0 0	32500000.0 0	NIL	NIL	11000000.00	10246942.0 0
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	16350000.0 0	161681000	2110000.00	169061000.0 0	106500000.0 0	97663242.0 0

10.3.1. (B) Justification of Budget Allocated.

- As per the requirement of Institute New Labs were established and New Equipment 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 Software and Renewal of Software 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:

(20)

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%

The funds allocated have been well utilized for:

- Developing of lab facilities and upgradation of existing facilities.
- Purchase of equipment 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 marks)

10.4.1 Quality of leaning Resources: (10)

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	3 crore`
Timing during working days	8.45 am to 12 pm
Timing on Sundays & Holidays	10am to 5pm

Layout and Floor plan

Ground Floor

The ground floor houses the following important sections.

- Reading room
- Periodical section
- Circulation section
- Audio-visual 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

Year	Number of New Titles Added
2017-2018	164
2016-2017	1193
2015-2016	4680

E- Recourses

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, Math & Statistics &Mechanical Engineering.	onlinelibrary.wiley.com	\$88694

2. Springer Nature

Subjects Covered	URL	Total Cost
Chemistry & Materials Science, Computer Science, Engineering, Mathematics &Statistics, Physics &Astronomy	link.springer.com/openurl?genre=book&isbn=978-1-4471-6807-2	€52,759.20

3. Elsevier

Subjects Covered	URL	Total Cost
Chemical Engineering, Chemistry ,Engineering, Materials Science, Mathematics, Physics & Astronomy, Computer Science	sciencedirect.com	\$102136

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

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	„	„	

Subjects Covered**URL****Total Cost**

Science Direct

www.sciencedirect.com/

(8 subject collection)

IEEE/IET Electronic Library (IEL) online

<http://ieeexplore.ieee.org/>

INR 3109669

BIS & ASTM Standards on our IP range.

<u>Subjects Covered</u>	<u>URL</u>	<u>Total Cost</u>
BIS	http://standards.bsb.co.in/	INR 1248345.60(for 3 Years)
ASTM	http://compass.astm.org	INR 744420.44

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 9.30 p.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, & LRs. 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

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Jr. Lib assistant	Mr. Shabir Ahmad Sheikh
Orderly	M Yousuf Mir
Orderly	Mr. Gh Mohammad Sheikh
Contractual	Four

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. Banday	Member
9. Dr. Javid Iqbal	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**(10)**

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

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 center (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

Security Details

S.No	DEVICE	FUNCTION
1	Sophos Firewall (Hardware)	Security Controller
2	Quick Heal (Seqrite) Antivirus Software	Anti-Virus

ANNEXURE-1

NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR

Hazratbal, Kashmir-190006.



**VISION DOCUMENT
2025**

NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR, HAZATBAL, KASHMIR.

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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.

1. 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.

2. 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

3. 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.

4. 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).

5. 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 manmade 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.

6) 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.

7) **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

Table-1: 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	-	

In addition, all the Departments offer Ph.D. programs.

Table-2: 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
		1	Communication Systems Laboratory
		2	Microprocessor Laboratory
		3	Digital Electronics Laboratory

ECE	10	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
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

CSE		1 2 3 4 5	Artificial Intelligence Lab Computational Lab Database Lab Computer Graphics Lab. Networks & Security Lab
MME		1 2 3 4 5 6 7	Mechanical Metallurgy Lab. Physical Metallurgy Lab. Foundry Technology Lab. Mineral Dressing Lab. Metallography & Heat Treatment Lab. Fuels / Furnaces / Refractories Lab. Powder Metallurgy Lab

Table-3: 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 sq. ft.
ME	B.Tech.. in Industrial & production Engineering	2016-17	50	02	04	08	02	02	01	01	
Chemistry & Chemical Engineering	B. Tech in Bio-technology	2015-16	60	01	01	02	02	01	01	01	

Table-4: Proposed M. Tech./ M.Sc. Courses (To be opened with Existing Departments)

Deptt	Proposed Courses	Yr. of Starting	Intake	Intake Enhancement		Faculty Requirement			Lab Staff Requirement					Space Requirement
				Year	No.	Prof	Asso. 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			3000 Sft
	Thermal Engg.	2020-21	25	--	-	01	-	02	-	01	01			3000 Sft
	Mechotrons & MEMS	2019-20	25	--	-	01	01	02	-	01	01			3000 Sft

	Automotive Engg.	2018-19	25	--	-	01	01	02	-	01	01			3000 Sft
	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-5: 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
				Year	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-6: Proposed Centres (To be opened separately)

Deptt	Proposed Centres	Year	Faculty requirement				Staff requirement				Space Requirement
			Prof.	Ass. 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
	Energy Research Centre	2014-15	01	02	--	1	1	1	1	-	
	Ergonomics	2018-19	01	02	--	1	1	1	1	-	

	Centre										of the Center
	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	-	
	Cryogenic Research Centre	2021-22	01	02	--	1	1	1	1	-	
	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 Telemedicine	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-7: Additional Space Requirement for the Departments and Centers

Deptt.	Additional Space Requirement (m ²)					
	Class Rooms	Labs	Seminar Rooms	Others (Faculty rooms etc.)	Proposed New Deptt	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 Centers	7X 200m ²					1400 m ²
Total:						9600 m ² say 10,000 m ²

Table-8: Proposal for consideration of establishment of New Campus.

SI 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

ANNEXURE-2**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**

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.

(Under the standard 3 tier rigid faculty structure)

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	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.	1 or more patents; Supervising two or more students for Ph. D.; Strong liaison with industry; Offering courses through	N. A.

		university, R & D Lab. or relevant industry.	Four experiments or computational projects added to teaching laboratories where appropriate.	application of ICT.	
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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 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.

<p>Teaching (For teachers of same or different institute)</p>	<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
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	<p>syllabi.</p> <p>f) No adverse record in teaching e.g. negligence in classes or exams.</p>
<p>Institute and Professional Activity (For Teachers of same or different institute)</p>	<p>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.</p> <p>b) Support to extra academic activity of students – NCC, NSS, Sports, Cultural, Music and Quiz etc.</p> <p>c) Organization of student functions.</p> <p>d) Warden ship of hostels and work towards improvement of living conditions of the students.</p>
	<p>e) Leadership and guiding students in scientific and technical work outside class room.</p> <p>f) Assisting management in construction, maintenance, ICT, Lawns & Gardens and providing services in the institute.</p> <p>g) Assisting management in record keeping, website management, document preparation, management of convocation etc.</p> <p>h) Departmental activities – T&P, Seminars, projects, Library etc.</p> <p>i) Collaboration with other Institutions in India and</p>
	<p>abroad.</p> <p>j) Organising conferences, symposia and activities of professional societies.</p> <p>k) Strictly no adverse record of negligence or dishonesty in discharging one's responsibility.</p>

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.D.s.
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 shall be 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.

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 instill 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 (up to 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 member 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.

17. 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.

18. 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.
19. 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 to retain 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 equipment, 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
<hr/>	
Total	= nx

$$x = [\text{Sanctioned faculty strength}] \div n$$

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 centers 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 honor 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 organisations.

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.

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Part C

2018

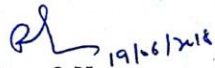
DECLARATION

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institute shall fully abide by them.

It is submitted that information provided 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.

Date: 19-06-2018

Place: Srinagar


Signature & Name
Prof. Raksh Selg

Head of the Institution with seal




Director
National Institute of Technology
Srinagar (J&K)