

RESULTS-FRAMEWORK DOCUMENT (RFD)



**NATIONAL INSTITUTE OF TECHNOLOGY
SIKKIM**

Mission:

- To develop the students as “Thinking Engineers by nurturing them in attaining and enjoying the technical and scientific excellence, global exposure and at the same time beholding the philosophy and the values for India and the world as a whole.

Vision:

- India has the capability and the responsibility to offer the World of Science & Technology essentially with sustainability, through philosophy, conscience and value system. NIT Sikkim will play its role.

Objectives (coupled to the mission)

- a. To impart quality education to the aspiring students of the Institute in the field of Science and Technology.
- b. To engage in high quality interdisciplinary research, beneficial to the Industrial ecosystem and the society as a whole.
- c. To provide multidisciplinary exposure for students to develop their constitutional values, cultural heritage, social accountability, and ethics of social and moral engagement.
- d. Enhance the commitment of faculty, staff and students to the centrality of diversity, social justice and democratic citizenship.
- e. Provide Leadership in the collaborative, professional relationships with schools, organization and other institutions focused on the improvement of educations in school.
- f. Enhance the effective and efficient management of the Institute.
- g. To evolve a system and to create an environment in which the students can realize their potential and their responsibilities to earn, create, implement and disseminate knowledge for improvement of human life with natural and social sustainability.

Actions and setting up of success indicators in attaining targets:

- 1) Total number of students admitted in a year (with a break up from various streams and various boards).
- 2) Summary of results.
- 3) Details of students doing research project in the year.
- 4) External summer project students trained in a year.
- 5) Total cost of major equipment procured in the year (computers and library books/journals included)
- 6) Number of faculty recruited in the year, research publications, seminars given, conferences attended, foreign or other national institutions visited.
- 7) Recognitions won (awards, committee membership, fellowships etc)
- 8) Number of Ph.D. students admitted in the year.
- 9) Number of Integrated Ph.D. program students admitted in the year.

Action report on campus development and academic governance:

- 1) No. of meetings of the statutory committee as per minimum requirements per year
- 2) % of funds utilized
- 3) Budgetary expenditure
- 4) % of area constructed to the total area to be constructed
- 5) Administrative staff strength
- 6) Ratio of staff trained to total number of staff in a year

Section -2 (Table 1)

Inter se priorities among key objectives, success indicators and targets

Objective	Wt (%)	Actions	Success indicator	Unit	Weight (%)	Target/Criteria Value				
						Excellent 100%	Very Good 90%	Good 80%	Fair 70%	Poor 60%
Good undergraduate teaching and research	20	Get students from, CCMT, CCMN, CSAB & JoSAA.	Admit 205 students every year from all categories	%	20	100	90	80	70	60
		Hold regular theory classes, Labs, tutorials and tests	% of students scoring BC and above.		30	80%	70%	60%	50%	40%
			% of students failing		20	2%	4%	6%	8%	10%
Build good academic infra-structure	20	Purchase of major research equipment, computers and consumables	Total amount of funds spent in a year	%	80cr	5cr	3cr	1cr	500 (Lakhs)	250 (Lakhs)
		Purchase large Number of Library books and Journals	Total amount of funds spent for library		20	150 (Lakhs)	100 (Lakhs)	80 (Lakhs)	60 (Lakhs)	40 (Lakhs)
Establish highly qualified teaching and research staff	20	Hire good faculty	Faculty strength (total number of faculty members in the institute)	%	20	>90	75	60	50	40
		Encourage them to do good research	Ratio of research papers published to the number of faculty members in a year		50	2.5	2.0	1.5	1	0.5

		Encourage them to have national/international linkages	Ratio of number of presentations at seminars/conferences by faculty members to the number of faculty members in a year.		20	2.0	1.6	1.2	0.8	0.4
		Encourage excellence in academic pursuits	Total number of awards/recognitions enjoyed by faculty members		10	15	12	09	06	03
Good research programs	20	Number of post graduate research students trained	Ratio of PG students to the number of faculty members	%	50	2.0	1.6	1.2	0.8	0.4
Good Academic Governance	20	Monitoring and evaluation	No of meetings of the statutory committee as per minimum requirements per year	%	20	16	12	10	8	6
		Campus development	Budgetary expenditure		20	40cr	36cr	32cr	28cr	24cr
			% of area constructed to the total area to be constructed		10	75%	50%	30%	20%	10%

Section – 3 Trends (Table 2)

Objective	Actions	Success indicator	Unit	Actual Value for FY 21/22	Actual Value for FY 22/23	Actual Value for FY 23/24	Projected Value for FY 24/25	Projected Value for FY 25/26
Good undergraduate teaching and research	Get students from, CCMT, CCMN, CSAB & JoSAA.	Admit 205 students every year from all the categories	%	99.5%	79.5%	95%	100%	100%
	Hold regular theory classes, Labs, tutorials and tests	% of students scoring CC and above.		75%	76.5%	79%	80%	80%
		% of students failing		3	2	2	2	2
Build good academic infra-structure	Purchase of major research equipment, computers and consumables	Total amount of funds spent in a year	%	672.62 (Lakhs)	170.83 (Lakhs)	68.6 (Lakhs)	500.00 (Lakhs)	550.00 (Lakhs)
	Purchase large Number of Library books and Journals	Total amount of funds spent for library		1.69 (Lakhs)	10.05 (Lakhs)	49.70 (Lakhs)	100.00 (Lakhs)	121.00 (Lakhs)
Establish highly qualified teaching and research staff	Hire good faculty	Faculty strength (total number of faculty members in the institute)	%	68%	68%	100%	100%	100%
	Encourage them to do good research	Ratio of research papers published to the number of faculty members in a year		2	1.5	2	2.5	2.5

	Encourage them to have national/international linkages	Ratio of number of presentations at seminars/conferences by faculty members to the number of faculty members in a year.		.8	1.6	1.2	2	2
	Encourage excellence in academic pursuits	Total number of awards/recognitions enjoyed by faculty members		6	6	9	10	15
Good research programs	Number of post graduate research students trained	Ratio of Ph.D. students to the number of faculty members	%	.4	2	1.6	2	2
Good Academic Governance	Monitoring and evaluation	No of meetings of the statutory committee as per minimum requirements per year	%	16	16	16	16	16
	Campus development	Budgetary expenditure		NIL	NIL	79.89 Cr.*	128.67 Cr	195.25 Cr.
		% Of area constructed, to the total area to be constructed		NIL	NIL	NIL	25%	50%

*The Construction of permanent campus is being initiated and the funds is being released as a mobilization advance for the project.

Section – 4

Description and Definition of Success indicators and proposed measurement methodology. Also give the rationale for choosing this.

Success indicators:

1) Objective – Good undergraduate teaching & Research

Success indicator i) Admit 160 students in the 4 Yr B.Tech program and 45 students in the 2 Yr M.Tech and M.Sc. programme on the basis of an entrance examination conducted by CSAB, JoSAA, CCMN and CCMT.

Measurement technique – Count the total no. of students admitted in the program for the academic year and also the number of students from each of the streams indicated.

Rationale- CSAB, JoSAA, CCMN and CCMT conduct national examinations and those who qualify in these are considered to be the cream of the student community. Thus, selecting them for NIT Sikkim, adds to the overall standard of the student intake. Those taken from the boards are also from the very top in each board, satisfying certain specified marks criteria and the entrance examination allows us to compare the standard of the students across the boards. Good quality students help NIT Sikkim to fulfill its major goal of creating a well-trained scientific community.

Success indicator ii) % of students scoring more than 60% (CC) in the overall yearly grade and the % of failures in a year (i.e., they get lower than 40% grade (F) in the yearly assessment.

Measurement technique – For each semester, the students are graded in each course that they take, for their homework, class tests, mid semester test and end-semester test. The overall grade (G_i) in a 10 point scale, awarded by the teacher(s) at the end of the semester is weighted by the credit rating of the course (C_i) and a semester grade point average (SGPA) is computed according to the formula $SGPA = \frac{\sum(C_i.G_i)}{\sum C_i}$. An SGPA of 6.5 or above is CC grade.

Rationale- The performance of students is to be monitored in each semester so that their progress can be measured. The grade point obtained in courses is a good indicator of how the student is performing. The number of failures is monitored so that proper help can be provided to disadvantaged students.

2) Objective – Build good academic infra-structure

Success indicator i) Purchase of major research equipment, computers and consumables

Measurement technique – Count the total amount of funds spent in purchasing research equipment, computers and consumables.

Rationale- Total amount of funds spent for research equipment is an indicator of the research facilities/laboratories which are established in NIT Sikkim for high quality research work to be carried out by faculty members. Setting up

of computational facilities is an indicator of the infrastructure development in NIT Sikkim.

Success indicator ii) Purchase large Number of Library books and Journals

Measurement technique – Count the total amount of funds spent in purchasing Books, Journals and educational resources. Rationale- A well-equipped library forms the core to high quality infrastructure required to excel in teaching and research.

3) Objective – Establish highly qualified teaching and research staff

Success indicator i) Hire of good faculty members

Measurement technique – Count the total number of faculty members employed in the institute in a year.

Rationale- A large number of well-trained faculty members are necessary to impart higher education and do research.

Success indicator ii) Encourage them to do good research

Measurement technique – Count the ratio of the total number of research publications to the number of faculty members employed in a year.

Rationale- High quality research performed by the faculty members is judged by their research output in terms of the number of publications each year. A ratio provides a measure of the average performance of every faculty member.

Success indicator iii) Encourage them to have national/international linkages

Measurement technique – Count the ratio of presentations given by faculty members in international/national seminars, conferences, and workshops to the total number of faculty members employed in a year.

Rationale- The visibility of the institute, research performance and collaborative efforts of faculty members can be judged by the interaction of the faculty member with the rest of the scientific community through seminars/presentations in conferences and workshops nationally and internationally.

Success indicator iv) Encourage excellence in academic pursuits

Measurement technique – Count the total number of awards and distinctions won by the faculty members in a year.

Rationale- Recognition of the faculty members, and the institution they belong to, is marked by the number of awards and distinctions won by them.

4) Objective – Good research programs

Success indicator i) Number of post graduate research students trained

Measurement technique — Count the total no. of Ph.D. students admitted in the program for the academic year.

Rationale- The credibility of the research program of NIT Sikkim is established through attracting large number of PhD students every year. Good quality students help the NIT Sikkim to fulfill their major goal of creating a well-trained scientific community.

5) Objective – Good Academic Governance

Success indicator i) Monitoring and evaluation

Measurement technique –Count the actual number of statutory committee meetings held and % of fund utilized.

Rationale-It shows the regularity of monitoring and evaluation by the governing bodies and pace of development works/spending.

Success indicator ii) Campus development

Measurement technique – Area constructed/developed and fund utilized for the purpose

Rationale-It takes into account the physical capacity building and facilities created in a given period of time.