Institutional Strategic Plan and its Effective Implementation and Monitoring

The institutional strategic plan comprising of different strategies for the institutional development has been prepared and made available by carrying out systematically strength, weakness, opportunities, threat (SWOT analysis) of the institute as explained in the following paragraphs.

The Director, Principal ,Dean Academic, Dean Research, Administrator, Registrar (Academic), Registrar (Administration), all HoDs, Nodal Officer, Stake holders of the Institute had several interactions, discussed extensively and arrived at the tentative institutional level SWOT analysis. This institutional level SWOT analysis has been reviewed in conjunction with the department-level SWOT analyses to arrive at a consolidated institute-level analysis. This was again discussed with all the faculty and staff to finalize the Strength Weakness Opportunities Threat of the institution as detailed below:

Procedure adopted for conducting the SWOT analysis and participation of the Stakeholders:

1. SWOT analysis was carried out by involving all stakeholders such as management, faculty, supporting staff, students, parents, alumni and representatives of employers. For this there were group consultations and discussions.

2. Meetings and consultation were conducted with the HODs and senior faculty. Each department submitted data on strengthening the following institutional infrastructure, laboratories, workshops, library and connectivity. Inputs were also received on new PG programs particularly in emerging areas training for the faculty and additional softwares that could be procured.

3. Adequate emphasis has been given to faculty development. Faculty/non-teaching staff provided their respective Training Needs Analysis.

4. Assessments were made on the additional academic inputs to be provided to the students hailing from weaker sections of the society such as SC/ST/OBC.

5. At the departmental level, departmental faculty, technical staff and students discussed their respective SWOT analysis.

6. Departments submitted their departmental development plans to the Principal's office.

7. Principal's office has consolidated the SWOT and the action plan received from the departments.

8. The entire developmental plan in totality was discussed with HODs /senior faculty. Their inputs and suggestions were considered.

9. The development plan was placed before the BOG for consideration and approval.

While carrying out the SWOT analysis he following factors were considered:

a) Existing Infrastructure of the institute which includes buildings, laboratories, equipment, workshops, library, connectivity, transport, furniture, hostels, medical facilities, play grounds, canteen, availability of Bank and Post office facilities etc.

b) Fee structure, admission policies of the government including reservations, requirements of the affiliating university/ AICTE/UGC.

c) Outcome based Curriculum Development and teaching & learning processes.

d) Additional academic support for weaker students to improve their performance in the examination.

e) Employability rate.

f) Training Needs of Faculty/Technical Staff/Supporting Staff.

g) Research, consultancy and IPR.

h) Industry Institute Interaction.

After several brain storming sessions, the strengths, weaknesses, opportunities and threats were identified:

Strengths:

S1. Supportive management, committed faculty & staff and motivated students.

S2. Strong focus on Excellence in Education, Research and Promotion of Innovation & Entrepreneurship.

S3. Youngest engineering college in the country to be conferred the prestigious Autonomous Status by UGC, New-Delhi. in the year 2007.

S4. Accreditation of the college by National Assessment and Accreditation Council (NAAC) with 'A' Grade for a period of 5 Years starting from 2014-15.

S5. Accreditation of eligible UG Programs under Tier-1 scheme (As per Washington Accord) of National Board of Accreditation.

S6. Availability of faculty in all required positions. High qualification experience of the faculty comprising 64 Ph.Ds predominantly from IISc, IITs, NITs, etc... Ongoing PhD work of 88 faculty members in different research centers of NMIT as well as in other Institutions of Eminence.

S7. Recognition of Ten Departments as Research Centres by VTU / Mysore University.

S8. Successful implementation of Out-come based Educational process.

S9. Inter-disciplinary research carried out by faculty and students. NMIT is a unique Institution which has established five Multi-Disciplinary Research Centres viz Center for Small Satellite Research, Center for Robotics Research, Center for Nanomaterial & MEMS, Center for Computational Fluid Dynamics and Center for Design Engineering & Process Simulation.

S10. Sponsored research Projects amounting to Rs. 8 Crores sanctioned by different National Funding Agencies such as DST, DIT, AICTE, DRDO, VGST, IEEE, VTU etc.

S11. Innovation and Entrepreneurship Development Cell (DST) and Business Incubator(MSME) have been Established to encourage the entrepreneurship among the students.

S12. Collaborations in R&D with North Dakota State University-USA, Indo-Korean Institute of Science & Technology, ISRO, Indian Institute of Science, NITK, Fluidyne etc…

S13. Unique Scheme of Deputing UG Students to Industry/R&D Organizations/IISc/IITs/NID for a minimum period of 6 weeks for internship program which qualify for academic credits.

S14. Excellent Industry-Institution Interaction which resulted in placement of 90% of the eligible students.

S15. Adequate and well maintained infrastructure for Curricular, Co-curricular and Extra-curricular activities which include NCC/NSS/Rotract/Sports/Cultural clubs/etc.

S16. Well established Library with adequate books and Journals conforming to AICTE/UGC requirements. Digital Library with subscription to E-Journals through the INDEST consortium. Rich E-learning resources from Stanford, MIT, Berkeley, Purdue, NPTEL etc.

S17. Cordial and harmonious relationship with all stake-holders.

S18. Robust and scalable IT Infrastructure with 1600+ computers, 200 Mbps (1:1) Internet connectivity and Wi-fi facility.

S19. Residential facility which has separate Girls & Boys Hostels for more than 1700 students with In-house Mess and Faculty Quarters on the campus.

S20. Good participation of students in Co-curricular and extra-curricular activities at International/National Level.

S21. Institute has been ranked in the band of 101-150 by NIRF during 2017.

Weaknesses:

W1. Admissions based on State Govt. norms results in the admission of some academically weaker students.

W2. PG programs do not attract highly talented students.

W3. Not enough highly merited students are opting for higher studies/Research.

Opportunities:

O1. Improve quality of research by increasing interactions with industry and R&D organizations.

O2. Strengthening interaction with Alumni to facilitate better connectivity with the industry.

O3. Creating training facilities to improve teaching capabilities of faculty.

O4. Increasing academic help to assist weaker students especially belonging to SC/ST/OBCs.

O5. Starting new P.G Programs in emerging areas.

O6. Accrediting the remaining few eligible UG & PG Programs.

O7. Institute has scope to improve its rank in NIRF ranking.

Threats:

T1. Difficulty to attract and retain PhD candidates faculty particularly in the Engineering disciplines.

T2. Lack of interest among bright Engineers to pursue research/teaching as career.

T3. Ensuring financial viability of the Institution as the norms for admissions are regulated by the State Govt.

Summary:

It is evident from the above analysis that NMIT has the potential to emerge as a globally known Technical Institute. It has strategic intent, requisite facilities and manpower for realizing its Vision of turning out globally competent technical manpower. With its emphasis on quality, Innovation and entrepreneurship, NMIT can transform itself into an Institution of choice for budding young and bright minds.

Strategic Plan

After understanding the Strengths, weakness opportunities and threats for NMIT we have following strategic plan for transforming NMIT into a quality technical education institute at the global level.

- To provide trained and skilled engineers of the highest quality to meet the global needs.
- To provide blended learning environments through Academic and Administration Reforms leading to improved learning outcomes for the students.
- To further improve our Laboratories /Research facilities/ Library to enhance the quality of teaching and learning process.
- To enhance the research culture and entrepreneurship among the faculty and students.
- To create an environment that enhances the interaction with reputed Indian/international institutions through mutual sharing of resources and joint research projects.
- To extend academic help to assist academically weaker students.
- To strengthen the competency of the faculty through Faculty Development Programmes and skills of technical staff and others through periodic training program.
- To Strengthen Industry/ Institute / Alumni Interaction enabling better placements and increased number of internships.
- To start new PG Programs in emerging areas/technologies, thus improving the potential of employability among students.
- To obtain full accreditation for the eligible UG / PG Programs.

By considering the strategic plans mentioned above, we chalked out the objectives and related expected outcomes for the strategic plan.

Strategic plan based on SWOT analysis	Specific Objective	Expected Results
To provide trained and skilled engineers of the highest quality to meet the global needs.	1. To increase the interaction with Tier-1/Tier-2 Industries. 2. To enhance learning activities such as Case studies/course projects/ assignments/etc.	• Increased Placements of Graduates. • Enhanced learning outcomes of the graduates.

	leading to increased learning outcomes. 3. To improve training of students on Contemporary issues.	
To provide blended learning environments through Academic and Administration Reforms leading to increased learning outcomes of the students.	1. To conduct Enrichment Programmes for senior Faculty. 2. To provide OBE training for all faculty members to strengthen outcome based learning and teaching (OBLT). 3. To enhance learning activities such as Case studies/course projects/ assignments/etc. leading to increased learning outcomes.	• Enhanced learning outcomes of the graduates • Conducive working environment for all stake holders.
To further improve our Laboratories /Research facilities/ Library to enhance the quality of teaching and learning process.	1. To set up of new laboratories in the emerging areas to improve the quality of PG/research in the institution. 2. Strengthening of Library resources to keep pace with fast change in technology.	• Rich Library Resources. • Modern PG/Research Laboratories.
To enhance research culture and entrepreneurship among the faculty and students.	1. To provide Seed money for pursuing research to Young faculty 2. To organize workshops/training on specific area of research for both faculty and students. 3. To organize training on IPR and entrepreneurship	• Attracting more Funded Research projects/Consultancy/Quality Research Publications • Focus towards IPR and Entrepreneurship.
To create an environment that enhances the interaction with reputed Indian/ international institutions through mutual sharing of resources and joint research projects.	To further motivate the faculty and students to establish networking with reputed Institution	• Faculty/Student Exchange • Joint research projects • Increased number of MOUs

To Extend academic help to assist academically weaker students.	To identify and handhold the academically weaker students	• Improved pass percentage /transition rate. • Enhanced employability.
To strengthen the competency of the faculty through Faculty Development Programmes and skills of technical staff and others through periodic training program.	To develop the faculty and staff holistically for enhancing their efficiency and effectiveness for fulfilling the requirement of various academic responsibilities.	• Skilled/Competent Faculty and staff.
To Start new PG Programs in emerging areas /technologies, thus improving the employability among students.	1. Strengthening of the existing PG programmes. 2. Starting of new PG programmes in the thrust/emerging areas.	• Research Focused PG Programs. • Skilled PG Students leading to better employment.
To obtain Accreditation for the remaining eligible UG / PG Programs as and when they become eligible.	1. To prepare the Self-Assessment Report and apply for NBA accreditation for all eligible Programs 2. To obtain NBA accreditation for eligible UG/PG programs	• Applying for NBA accreditation successfully. • 100% of the Programs Accredited.

Objectives and related expected outcomes for the strategic plan