

INDUSTRY INSTITUTE INTERACTION (III) CELL

1. Creation of Cell

The Industry Institute Interaction Cell was established at VNIT (the then VRCE) in 1989 under the Industry Institute Interaction Scheme of the Ministry of Human Resources Development, Govt. of India. Over the years, considerable progress has been made and the academic departments have been carrying out various activities envisaged under the III independently and with support from the III Cell, as deemed necessary.

2. The Objectives of Industry Institute Interaction Cell

The III Cell was established with the following major objectives :

- To evolve educational programmes which are consistent with the broad requirements of the industry and which can give rise to engineering personnel capable of coping-up with the accelerating pace of the technological development
- To create adequate facilities of updating knowledge of professional engineers and technologists to meet growth and developmental needs of the industry
- To coordinate the research and developmental activities of the two systems

3. Infrastructure

The III Cell is located on ground floor in Administrative Block in the office of Training & Placement Department. The total floor space available is about 100 sq. m. which include a meeting room with seating capacity of about 40 persons. Facilities such as photocopier, overhead projector, TV, VCR and LCD are available with the Cell.

4. Constitution of the III Cell

The Cell has been reconstituted recently in September 2013 incorporating faculty –in- Charge and one faculty member from each department. The composition of the cell is as under :

1. Dr. V. A. Mhaisalkar, Professor & I/c III Cell
2. Dr. A. M. Kuthe, Professor, Mechanical Engg. Deptt. – Member

3. Dr. V. K. Deshpande, Professor, Physics Deptt. - Member
4. Dr. N. R. Thote, Asso. Professor, Mining Engg. Deptt.
5. Dr. S. S. Bhat, Asso. Professor, Electrical Engg. Deptt.
6. Dr. A. B. Andhare, Asso. Professor, Mechanical Engg. Deptt.
7. Dr. S. Mandavgane, Asso. Professor, Chemical Engg. Deptt.
8. Dr. Yogesh Deshpande, Asso. Professor, Humanities Deptt.
9. Dr. Ashwin Kothari, Asso. Professor, Electronics Engg. Deptt.
10. Dr. R. V. Ralegaonkar, Asso. Professor, Civil Engg. Deptt.
11. Dr. K. M. Bhurchandi, Asso. Professor, Electronics Engg. Deptt.
12. Prof. Manish Kurhekar, Asso. Professor, Comp. Sc. & Engg. Deptt.
13. Dr. Jatin Bhat, Asst. Professor, Metallurgy & Materials Science Deptt.
14. Prof. Alpana Dongre, Professor, Architecture & Planning

5. Strategy Adopted For Industry Institute Interaction

5.1 The Concept

In light of the liberal economic and industrial policy recently adopted by the Govt. of India, the industrial scenario is fast changing. Industries are compelled to export a part of their production and compete with multinationals for the internal market. The emphasis has shifted to quality products and well trained manpower to produce such products. There has been a greater need for industries to depend on technical institutions for R&D and for supply of highly qualified and skilled manpower. Retraining of the work force has become major activity for all industries. There is, thus a good opportunity for institute to interact with industries for mutual benefits.

The Industry-Institute Interaction would accrue mutual benefits when a symbiotic relationship is developed between the two systems. The ultimate aim of this relationship will be the creation of confidence in industry by the Institute which would result industries involving voluntarily the Institute at various stages of its development.

The development of such symbiotic relationship requires, firstly, careful understanding of the industry needs such as relevant R&D, cost effectiveness, time bound programmes, technology upgradation etc. by the Institute and, in turn, understanding the capabilities and

limitations of the institute by the Industry. Recognising the above, following thrust areas have been identified which require immediate attention :

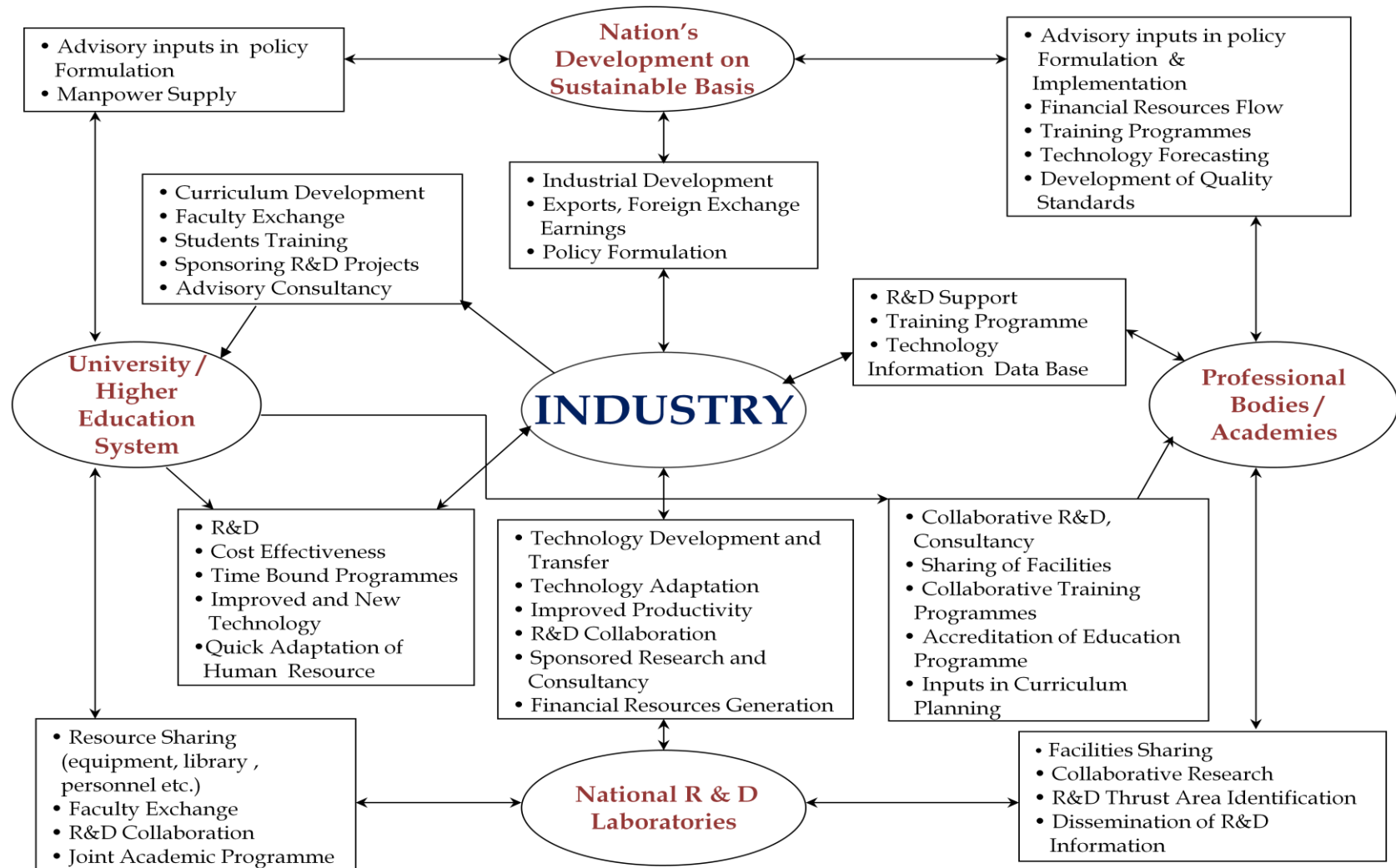
- Reorientation of curriculum
- Exchange of Experts between the Institute and Industry
- Involvement of Teaching Staff in Industry
- Institute to gain Confidence of Industry
- Institute as a Consultant in R&D
- Technological Database
- Continuing Education Programme
- Establishment of Linkages
- Institute's Self-Reliance in Finances

A typical mode of interaction between Institute, industry and other organizations is presented in Figure is being followed to accomplish the desired goal of economic development of our country on sustainable basis.

5.2 Road Map

In keeping with the above thrust areas, following action plan has been prepared by the Institute to fulfill the aims of Industry Institute Interaction into achievements:

- i. Preparing / updating of an information brochure / audio-visual giving salient features of the Institute including various programmes, R&D activities (completed / ongoing), expertise available along with equipment and testing facilities.
- ii. Establishing / continuing liaison between faculty in the Institute, representatives from the Industries and representatives from organizations involved in the promotion of industrial development in the region through organizing regular group meetings for mutual benefits to both the systems i.e. industry and institute
- iii. Identifying and preparing / updating a list of top executives and technologists from various industries / establishments in the region and working out a system of inviting them to address the faculty and students
- iv. Preparing / updating a comprehensive directory of technology experts in different fields of expertise and know-how and forging continuing links with them through various means of involvement like talks, guest lectures, research collaboration, students project guidance, seminars etc.



Model for Institute – Industry –National R&D Lab and Other Organisations Interaction

- v. Reviewing post graduate and graduate curricula and reorient these to meet the needs of the industry by involving experts from industry in framing syllabi
- vi. Providing the faculty training in industry
- vii. Organising refresher courses / training programmes for working professionals
- viii. Membership drive for 'Industrial Associateship Scheme' with the objective of providing various facilities at the institute such as library, testing, consultancy etc. at a concessional rate to the member industries/ organizations.
- ix. Instituting 'Annual Student Project Award'
- x. Organizing Entrepreneurship Awareness Camp (EAC) every year for senior students

6. Linkages Established

Linkages have been established with following prominent non-government and government agencies in the region.

Non-Govt. Agencies

- Confederation of Indian Industries (CII), Western Region, Mumbai
- Vidarbha Industries Association (VIA)
- MIDC Industries Association (MIA)
- Butibori Industries Association (BIA)
- Vidarbha Productivity Council (VPC)

Govt. Agencies

- Joint Director of Industries, Nagpur
- Small Industries Service Institute (SISI), Nagpur
- District Industries Centre (DIC), Nagpur
- Maharashtra Centre for Entrepreneurship Development (MCED), Nagpur

7. Industrial Associateship Scheme (IAS) BY VNIT

Recognizing the importance of industry institute interaction (III), VNIT has designed a Scheme viz. Industrial Associateship Scheme as one of the activities aimed at promotion of

III. The scheme envisages an industry, organization to join the institute as an Associate Member. The details of membership are attached.

Following member industries have been enjoying the benefits of IAS mutually with VNIT:

- Diffusion Engineers Pvt. Ltd., M.I.D.C., Nagpur
- Ferro Alloys Corporation Ltd., M.I.D.C., Nagpur
- Duraweld Wearplates Pvt. Ltd., M.I.D.C., Nagpur
- Weldwell Electrodes, M.I.D.C., Nagpur
- Furn Plastic, M.I.D.C., Nagpur
- ANK Seals, M.I.D.C., Nagpur
- Ispat Industries Ltd., Kalmeshwar, Nagpur
- VIP Industries Ltd., M.I.D.C., Nagpur
- Reaselack Polymers Pvt. Ltd., Nagpur
- RAN Chemicals Pvt. Ltd., Nagpur
- National Institute of Secondary Steel Edu., Nagpur
- Minex Metallurgical Co. Ltd., Nagpur
- Sandeep Metalcraft Ltd., M.I.D.C., Nagpur
- Chanvim Engg.(India) Pvt. Ltd., Kalmeshwar
- Paramount Sinters Pvt. Ltd., Nagpur
- SWASTECH Building Systems, Nagpur
- Concretio India Pvt. Ltd., Nagpur

8. Students' Projects

A number of student projects have been offered in the recent past as a result of interaction activities. Some of the industries and organizations who offered the projects are listed below:

1. Aerocom Cushions Pvt. Ltd., MIDC Hingna, Nagpur
2. Chawra Plastics, MIDC Hingna, Nagpur
3. Diffusion Engineers Ltd., MIDC Hingna, Nagpur
4. Nice Paper Ltd., Nagpur
5. Prestressed (India) Pvt. Ltd., Chandrapur
6. Subham Polymers Ltd., Nagpur

7. Indo Rama Synthetics (I) Ltd., MIDC Butibori, Nagpur
8. Rajesh Steel Industries, MIDC Butibori, Nagpur
9. Abhishek Steel Ltd., MIDC Butibori, Nagpur
10. Ideal Sealtape, MIDC Hingna, Nagpur
11. Centralized Controls, Nagpur
12. Eros Metal Works Ltd., MIDC Hingna, Nagpur

9. Campus Diary

With a view to promoting cohesiveness and improving interaction between faculty, students and other staff and the member industries, a newsletter "CAMPUS DIARY" which was regularly published by the Industry-Institute Interaction Cell is being rejuvenated.

10. Highlights of Industry Institute Interaction Activities (2010 – 13) (To be updated)

10. 1. Participation of Industry Experts in academic development of the Department

Various Departments have inducted experts from Industry as Member of the Board of Studies. Details are given below. These members have been providing their valuable inputs in the academic development of the Department.

Sr. No.	Name of Expert (Member of Board of Studies)	Department
1.	Mr. Shekhar Patankar, Delivery Head, Persistent Systems Ltd., Nagpur	Computer Science Engineering
2.	Dr Atul Vaidya, Scientist & Head, Solid Waste Management Division, NEERI, Nagpur	Chemical Engineering
3.	Dr. Tapas Nandi, Scientist & Head, Waste Water Technology Division, NEERI, Nagpur	Civil Engineering
4.	Mr. Amol Joshi, Mahindra & Mahindra Ltd. Nagpur	Mechanical Engineering

10. 2. Chair Professorship Sponsored by Industry / Organisation

The following Chair Professorship is offered by the concerned agencies. These will be implemented in the academic year 2013-14.

Both the Chair Professorship have been sanctioned by the concerned agencies. The funds from Maharashtra Pollution Control Board have been received while from the Ministry of Steel Govt. of India are awaited.

Sr. No.	Title	Department
1.	Maharashtra Pollution Control Board Chair Professor for Environmental Technology & Pollution Control	Civil Engineering
2.	Ministry of Steel Chair Professor in the Metallurgical and Materials Engineering	Metallurgical and Materials Engineering

10. 3. Following Guest Lectures were delivered by Industry Personnel in the recent past

Sr. No.	Name of Speaker	Topic of Guest Lecture
1.	Dr. Prasad Tipnis, Senior Vice President, Reliance Industries Ltd.	“Safety Management in the Chemical Industry”.
2.	Dr. Shrikant Bhat ABB Global Industries and Services Limited Bangalore	Introduction to Genetic Algorithms and Multi Objective Optimization’
3.	Dr. Amit Gaikwad, <i>Global Research, John F. Welch Technology Centre, Bangalore</i>	Intellectual Property & the Changing Face of Innovation
4.	Dr. Shrikant Bhat, <i>ABB Indian Corporate Research Centre, Bangalore</i>	State of the Art, Emerging Trends and Research Opportunities for Solar Thermal Applications
5.	Dr. B. D. Kulkarni, Distinguished Scientist CSIR, NCL Pune	Writing a research proposal, identifying funding agency, prerequisites for submitting a proposal and related topic

6.	Hrushikesh Garud, Texas Instruments, Bangalore	Signal Processing through Hardware
7.	Naveen Shriniwasmoorthy, Texas Instruments, Bangalore	DSP –Processor based pattern Classification

The Department of Electronics Engineering organized 17 No. Guest Lectures on various topics.

10.4. Following Industrial Visits have been undertaken by Students

Chemical Engineering Department

- i. Ballarpur/Ballarshah paper mill, Ballarshah, Chandrapur.
- ii. Raymonds Ltd. Sausar
- iii. Reliance Industries, Mauda

Civil Engineering Department

- i. Pench Water Treatment Plant
- ii. Sewage Treatment Plant at Bhandewadi
- iii. Ready Mix Concrete Plant
- iv. Brick Making Plant
- v. Dr. B. R. Ambedkar, International Airport
- vi. Irrigation Projects

Electronics Engineering Department

10 students have undergone Industrial training while 120 students have done internship in various industries.

10.5. Following Industry Oriental Research Project / Activity have been undertaken :

Sr. No.	Title of Project / Activity	Name of Industry
Chemical Engineering Department		
1.	Study on Application of tyre pyrolysis solid residue	M/S Radiant Udyog (Pvt) , Butibori Nagpur

Mechanical Engineering Department		
2.	To Develop rapid prototyping model	Soni Polymers Ltd. Nagpur
3.	To Develop rapid prototyping model	B. P. Ergo Ltd. Nagpur.
4.	Tool inspection	MECL Nagpur
5.	Reverse engineering	Paramount Conductors
6.	Reverse engineering	Dyna pro Motions Pvt Ltd.

10.6. Research Project

Following Industry Oriented Research Projects have been undertaken in the Department of Mechanical Engineering

Sr. No.	Title of Project	Project Cost in lacs
1.	Development and testing of Customized Joint Replacement Implants using layered manufacturing.	50.06
2.	Crack Detection in Structural components using non-linear frequency response function.	9.36

10.7 Scope of III Activities under the Centre of Excellence in Electronics Engineering Department

The NPIU, under TEQIP – II, has approved, in July 2013, the establishment of Centre of Excellence (CoE) in “Combeded Systems : Hybridization of Communications and Embeded Systems” in the Department of Electronics Engineering under subcomponent 1.21. Funds to the tune of ₹ 5.0 crores have been sanctioned for the purpose. An amount of ₹ 25.00 lacs have been earmarked for collaboration with Industry for Applicable Research and Product Development under III Cell activities. The technology industry partners of CoE have been identified as under:

- Agilent Technologies, Banglore
- National Instrument, Banglore
- NIZ Designs, NIlogic Pvt. Ltd., Pune
- NCS, Banglore
- Icon Automotion, Banglore

The PG students (36 nos.) of (i) VLSI and (ii) Communication Systems Engineering were imparted hands on training on “Advanced Design Tools for EM Simulation, RF Circuit Design and Communication Network” by the above group of Industry

VISVESVARYA NATIONAL INSTITUTE OF TECHNOLOGY, NAGPUR

Industrial Associateship Scheme

Membership

Registered Industries / Organisations / government agencies are eligible to become member of the Institute, at following rates;

Type of Industry	Deposit (Refundable)	Annual (Subscription)
Small Scale Industries	Rs. 3000/-	Rs. 1000/-
Medium Scale Industries	Rs. 5000/-	Rs. 2500/-
Large Scale Industries	Rs. 10000/-	Rs. 5000/-
R&D Institutions, consultancy organizations and other service sectors	Rs. 6000/-	Rs. 3000/-

Benefits

Library facility

- i. Members shall be able to avail library facilities based on the membership fee paid i.e. 2 tickets for small scale industries, 3 rickets for medium scale industries, and 5 tickets for large scale industries and 4 tickets to other orngaisations
- ii. Xeroxing of technical paper available in the library and other related facilities shall be extended on payment
- iii. Consultation and testing facilities shall be extended to Industrial Associated member at concessional rates (e.g. 10% concession for minimum fee of Rs.1000/-)

Seminars / Training Programmes

- iv. The Institute will give 10% concession to member on Registration fee for attending Short Term Courses of Continuing Education Programmes conducted by the Institute, as well as for attending conferences / Seminars / Workshops that are organized by VRCE.
- v. VRCE shall organize at least one special seminars or symposia in a year, in the thrust areas of technology for the benefit of the members, few of cost.

Guest Lectures by Faculty

- vi. Members will get preference in inviting the faculty for any specific lecture talk, in their organization.

Industry Oriented Projects

- vii. Priority will be given by the Institute in taking up student projects in areas identified by member industries, with their cooperation and financial support.

Information dissemination

- viii. General and technical information available with VNIT shall be provided to the members and the exchange of information shall be both ways to the extent possible.
- ix. Industry member can avail of / may provide video films / information material on products, manufacturing techniques etc.
- x. Meeting of the associate members will be arranged once a year, to which an eminent speaker will be invited to give a lecture on the topic of current interest.

**VISVESVARAYA NATIONAL INSTITUTE OF TECHNOLOGY,
SOUTH AMBAZARI ROAD, NAGPUR**

Industrial Associateship Scheme

(Please mail the Proforma, complete in all respects, to
Dr. V. A. Mhaisalkar, Professor & Faculty I/c Industry Institute Interaction Cell
email: vasantmhaisalkar@yahoo.com)

PART A

1. Name of the Industry / Organisation

Sector	Private	Public	Small
(Please tick mark)	Large	Medium	

Registration No.

1.1 Name of the Head / Contact Person

Designation & Address

1.2 E-mail

1.3 Fax

1.4 Phone

2. Products Manufactured (items)

3. Services Rendered

PART B

4. Potential areas, in your opinion, for mutual interaction (Please tick mark)

4.1 Research

4.2 Testing

4.3 Consultancy

4.4 Students Projects

4.5 Participation in Refresher Courses / Training Programme organized by VRCE :

As Guest faculty

By Deputing Trainees

4.6 Any other (Please Specify) :

PART C

5. Application for Membership (Please furnish the information, as appropriate)

Please find enclosed a Cheque / Demand Draft for Rs..... drawn in the name of “Director, VNIT, Nagpur”

Cheque / D.D. No. & Date

Bank:

Signature:

Name:

Designation: