

Policy for Industry Visits by UG and PG Students

Sponsored by CAC

Revised in May 2020

Preamble

1. This document governs procedure for smooth conduct of Undergraduate (UG) and Postgraduate (PG) Student Industrial visits. In order to impart high quality education at NUST, it is imperative that the students as well as the faculty are aware about the day to day working of Industry and Corporate Sector. The students must also be able to relate their theoretical knowledge with the practices being followed in the Industry.

2. In this document, the term Industry refers to both pure Industrial units that are manufacturing products, as well as service organizations, whether in Corporate Sector or Public Sector, i.e., Industry is used as a generic term for the sake of this document. In this document, the term School is being used for NUST Schools, Colleges, Institutes and Centers (basically all set-ups that have students and are running UG or PG programs).

Purpose of Industry Visits

3. Industry and business is all about applied knowledge. Industries apply various principles of knowledge from fields as diverse as Engineering Sciences, Social Sciences, Business and Management Sciences etc. Students need to be guided in a way that they can see in practice, what they were taught in class, in theory. Therefore, the first and foremost purpose of Industry visits by students is to familiarize them well with processes and procedures being used by the Industry and to relate this knowledge with what they are being taught in class.

Role of Faculty and Industry Liaison Officers (ILOs) in Planning and Executing Industrial Visits

4. Faculty plays a pivotal role in preparing itself and then its students for getting the best value out of industrial visits. The faculty and ILOs must apprise

itself of the various industrial units within the vicinity of the University, and visit these for fostering a good relationship with the management as well as find out in detail about the business and manufacturing processes of the industrial units. This information should lead to create connections between various subjects taught to the students and how these are applied in the particular industrial unit. This, in turn, enables the faculty to prepare the class for the visit to that Industry. At the same time, the goodwill generated by visits by NUST faculty members that are well-informed about that particular Industrial unit will lead to securing projects from the Industry, as well as gaining internship and employment possibilities for the students. ***Faculty members or ILOs must accompany students on the Industry visits.***

5. **Student Industry Visit Application (SIVA)** is developed to further automate Industry Visits' process of UG/PG Students at NUST. Purpose is to streamline and make the process of scheduling and reporting more efficient. School ILO's and relevant Faculty to ensure the timely completion of all steps and documents as per the SOPs and features of application plus below-mentioned facets of the Industry Visit Policy.

6. **Salient Features of the Policy**

NUST Departments and Institutes responsible for planning, executing and monitoring Industry Visits include: CAC Office - RIC Sectt (Main Sponsoring Office), ACAD Sectt, NUST Schools and Colleges, P&R Sectt (Main Admin Office), ICT Dte. Key features are given below:

- a. Industry Visit is mandatory for all UG students and optional for PG students. The attendance should be marked for each Industry visit.

- (1) Schools are encouraged to conduct more than one visit per semester with an aim to cover maximum organizations. Therefore, Industry visits to be conducted **preferably twice** in every semester.

(2) At least one Industry visit per semester is compulsory for all UG students with a minimum of 08 visits being mandatory during the entire 4-year duration of the program.

(3) Similarly, Industry visits are desirable, yet optional, to be arranged for PG students during their entire coursework period.

b. **Primary responsibility of arranging the visits lies with the School's Industry Liaison Officer (ILO).** In case of non-availability of an ILO, the task will be undertaken by the School's AD Admin (or equivalent).

c. Schools are to solicit supplemental support from CAC wherever required. CAC will provide all necessary support to Schools in identification and finalization of relevant Industries in a given semester, other than logistical arrangements for the visit, which is the responsibility of the School.

(1) Based on the feedback received in a given semester, Schools will prepare a **“Schedule of Industry Visits”** before start of every new semester and share with CAC office. This schedule will include tentative list of Industries, suggested by School for each program and discipline, to be visited during the course of the upcoming semester along with additional support required from CAC in identifying relevant organizations and arranging the visits. The Schools will share **all the** necessary information, **regarding the particular industry visit** including number of students, their disciplines, courses, semesters, tentative dates etc. **at least 3 weeks prior to the start of semester duly mentioned in “Schedule of Industry Visits”**. This will give CAC sufficient time to identify and contact the relevant Industry partners well in

advance as requested by Schools, and ensure that visits take place as per the desired / preferred schedule of the Schools.

- (2) Each School will attain formal approval of the Tentative Plan of Industry visits by submitting the schedule to Pro-Rector Academics through CAC office at least 2 weeks prior to the start of the semester. CAC will act as the sponsoring office for processing of industrial visits. Once the schedule is approved, individual visits for that particular semester will not need separate approvals.
 - (3) In case new organization is identified for any particular visit or has to be replaced with the tentative plan during the semester, School ILO /AD Admin will communicate the same to CAC office 2 weeks prior to conduct of the visit for formal approval, (required data fields will be communicated to the CAC office by the respective Schools, both manually and also on SIVA).
 - (4) For transport and security arrangements of visits, the Schools will communicate the requirements to NUST Administration Directorate.
 - (5) For visits arranged through CAC, School ILO / AD Admin will work in close coordination with CAC for smooth planning and execution of the visits.
- d. At least two faculty members per 30 students must accompany the students for the Industry visits. Concerned Head of Department (HoD) will be responsible for nominating accompanying faculty/ staff member for the visit. Students must not visit Industry without being accompanied by **the** faculty. CAC team member or School ILO may accompany the students and faculty for the visit, if required.

- e. In order to cover maximum number of relevant Industries spread across the country, and if enough number of relevant Industries for particular disciplines are not available in the close vicinity of the Schools, CAC and Schools may identify out-station Industries.
- (1) For visiting out-station Industries, day-trips will be preferred, so as to avoid additional logistics and costs.
 - (2) In order to cater to Industry requirements and availability along with the academic calendar of students, out-station visits to be planned section wise, if necessary. Visits for sections having strength over and above 50 might be arranged in 2-3 batches during the week days and Saturdays.
 - (3) In special cases, night stay may be allowed, for which separate approval will be taken by the School. For out-station visits requiring night stay, appropriate accommodation will be arranged for the students by the School and NUST Main Admin Office, Planning & Resources (P&R) Sectt.
- f. As far as food expenses are concerned, students will be responsible for their tea/refreshments during the visits.
- g. Students & staff will follow the dress code-**coverall** for students and lab coat for staff. However, this will be flexible for the Business School as they also visit industries other than Manufacturing.
- h. Actions required to be taken before the visit:
- (1) The visiting class will be required to do background research on the **industry** before the visit, as it would increase their understanding about the **industry** and its operations. The background research may be done by visiting the **industry's** website as well as getting information through their concerned faculty members and through CAC.

- (2) Concerned faculty members will familiarize themselves with the Industry to be visited, preferably with a personal visit (or via email or telephonic discussion with the Industry representative) and then prepare a list of “learning objectives” to be achieved during the visit. CAC to be kept in loop throughout the correspondence with Industry.
 - (3) Faculty members will properly brief the class about the learning objectives that the students have to achieve and the processes they will be witnessing. The faculty members should also discuss with the students the questions and problems to which students should look for answers and solutions during the visit.
 - (4) The faculty members will explain the relationship of processes, machinery and inputs as well as any other physical, chemical, or any other phenomenon that students ought to observe, that relates to what students are being taught in class.
 - (5) The visiting class will also be briefed about their desired conduct during the visit by the concerned HoD/ senior faculty member.
- i. Students will be encouraged by the accompanying faculty to observe the following areas (based on areas of relevant School):-
- (1) Layout and organization of **the industry being visited**.
 - (2) Level of technology and methodologies employed.
 - (3) Quality Control / Quality Assurance procedures, and the costs incurred by the **industry** for QC/QA.
 - (4) Inventory & supply chain management.
 - (5) Production, planning and control.
 - (6) Production standards being followed.
 - (7) Standard of services being provided.

- (8) Mode of product traceability within the organization and with the customer.
 - (9) R&D and product improvement initiatives.
 - (10) Industrial safety and materials handling.
 - (11) Efforts to reduce or recycle waste in the Industry.
 - (12) Measures taken to safeguard environment.
 - (13) Marketing strategies.
 - (14) Cost accounting methods and techniques.
 - (15) Recruitment policy and procedures.
 - (16) Human resource development policy.
 - (17) Welfare of employees.
- j. During the visit, accompanying staff member will take photographs of locations allowed by the Industry. No photograph will be taken by students inside the premises of the visiting **industry** without their permission.
- k. Faculty / staff members may carry small souvenirs of the University or their School to present to the management of the organization they are visiting on behalf of the Dean/Principal/Commandant.
- l. Feedback and reporting is automated on Student Industry Visit Application (SIVA). School ILOs to ensure the Post Industry Visit report for every visit, Student Post Visit Questionnaire and Faculty Post Visit Report are duly filled, uploaded on the application at the end of every visit and shared with CAC Office and Pro-Rector RIC Sectt, so as to monitor the feedback and take corrective actions, if any.
- (1) Post visit de-briefing will be done by the faculty in order to assess the depth of learning objectives achieved by the students, and to use this assessment as a basis to further improve their teaching methodology and techniques. Post

visit report for every visit will be forwarded to School Management (Principal / Commandant) within two weeks after the visit. Sample post visit report is attached as Annex A. School ILOs to ensure the same is duly filled and uploaded on the application to be further forwarded to Pro-Rector RIC, NUST for reporting purposes.

(2) Feedback questionnaire regarding the organization visited will be distributed to the students who will fill up the questionnaire after the visit. These filled questionnaires will be handed over to the ILO on return, who will maintain a file of this record and share the responses with the concerned HoD for taking corrective action in order to improve the overall conduct of the Industry Visits, if required. Sample student feedback questionnaire is attached as Annex B. Faculty assigned for a particular visit and School ILO, to ensure students complete their respective feedbacks on SIVA as soon as visit is completed.

(3) The visiting faculty member(s) will also fill a post-visit feedback questionnaire regarding the conduct of the visit indicating the timely availability of transport/ students etc. as well as the potential of any Industry/ research project that can be undertaken with the visited organization, and the potential of gaining internships or jobs for the students in that particular organization. Sample faculty feedback form is attached as Annex C.

m. School ILO / AD Admin will forward a short write-up and some photographs of the visit to Marking and Communications (M&C) Dte for publication in NUST News. Copy of the same will be forwarded to the School's Librarian for placement in the archives.

The same brief and photographs to be shared with CAC. CAC will also publish the same in the CAC Newsletter, and share on social media.

- n. CAC will write an appropriate note of thanks to the Industry after the visit for their support and hospitality. If the visit has been arranged by the School, the Principal / Dean will write this note of thanks.
- o. A reward and penalty mechanism to be adhered by the students and faculty for effective execution of the visits:
 - (1) Visiting Faculty Member(s) to arrange a class meeting to reinforce the learning gained from the visit. This will serve as a basis for the faculty to further improve their teaching techniques and method. Students should also be asked to write a brief write-up after every Industry Visit as their class assignment.
 - (2) For motivation of the faculty members, Industry Visits should be given weightage in the respective Annual Appraisal Report (AAR) of the faculty.
- p. CAC will maintain a relationship with the Industries visited by the students, in order to keep the organizations on board for future student / faculty visits, and also for spin offs like projects and placements. The relationships established or maintained will be used for similar activities / KPIs of other Schools, wherever applicable.
 - (1) In addition to UG Student industrial visits, industrialists and their representative's visits to Schools should also be encouraged to find ongoing Lab projects and its relevance to the industry and national needs. They can be invited to deliver a talk/seminar to the students (all batches of UG+PG) to keep them abreast with industrial knowledge and motivate them.

- q. Student Industry visits are a useful tool for ensuring good placement, both internships and jobs, for the students in the Industry. Industry visits also lead to better understanding of Industry practices versus theory being taught in the classes, and leads to curriculum improvements. These visits should also be used as a mechanism to get R&D projects from Industry.

(1) In light of the feedbacks obtained in a given semester, CAC will timely disseminate information/action items, if any, pertinent to NUST Placement Office (NPO), Business Development Office (BDO), Research and other relevant departments of NUST for possible outcomes and future collaborations in their respective domains.

- r. Key features of the Industry Visit Policy are summarized below. All NUST Schools/Departments and Faculty need to ensure close coordination for smooth execution of the visits.

KEY FEATURES OF INDUSTRY VISIT POLICY			
S. No.	Action	Timeframe	Responsibility
1.	<p>List of Industries</p> <p>a. To finalize the list of Industries and share tentative schedule of visits for each program, batch and section with CAC Office for a given semester.</p> <p>b. Revision of list of industries.</p>	<p>3 weeks prior to start of every semester</p> <p>Every 1-2 years</p>	<p>School ILO/Focal Person, CAC</p> <p>School ILO/Focal Person, CAC</p>
2.	<p>Data Management on SIVA</p> <p>a. Direct supervision, facilitation and maintenance of data/records on SIVA.</p>		CAC and ICT Dte

	<p>b. To update student sections of a particular batch, semester and add students in each section.</p> <p>c. To add details of fresh intake of students.</p> <p>d. Setting up Industry Data for a given semester.</p> <p>e. To set up and schedule Industry Visits on SIVA.</p> <p>f. Faculty and Student Feedbacks for reporting purposes.</p>	<p>3 weeks before start of semester</p> <p>As and when lists are finalized at School level</p> <p>3 weeks before start of semester</p> <p>“do”</p> <p>Upon completion of every visit</p>	<p>School ILO/Focal Person, CMS Coord</p> <p>CAC and School ILO/Focal Person</p> <p>School ILO/Focal Person</p> <p>ILO/Focal Person and Assigned Faculty for a particular visit</p>
3.	<p>Tentative Industry Visit Schedule and Formal Approval before Start of Every Semester</p> <p>a. School ILO will set up and schedule visits on SIVA to generate tentative industry visit schedule for a given semester.</p> <p>b. Tentative Schedule to be approved by Pro-Rector ACAD.</p> <p>c. Approved Tentative Industry Visit Schedule to be shared with NUST Schools and P&R Sectt (NUST Main Admin Dte)</p>	<p>3 weeks prior to start of every semester</p> <p>2 weeks prior to start of every semester</p> <p>At the start of every semester</p>	<p>School ILO/Focal Person</p> <p>CAC and ACAD Sectt</p> <p>CAC, School ILOs, P&R Sectt (NUST Main Admin Dte)</p>

	to manage and arrange transport during the semester.		
4.	<p>Approval Process for Visits Over & Above Approved Tentative Industry Visit Schedule</p> <p>a. For approval of visits over and above tentative industry visit schedule (which includes change in the Industry to be visited), ILOs to take formal approval from Pro-Rector ACAD through CAC Office.</p> <p>b. Arrangements for transport to be requested from P&R Sectt (NUST Main Admin).</p> <p>c. This is applicable to on-campus Schools only. Military Colleges to ensure process already being followed at their respective institutes is implemented.</p>	<p>At least 1-2 weeks before the scheduled time</p> <p>Upon formal approval of the visit</p>	<p>ACAD Dte, School Administration (On-campus only), School ILO/Focal Person, CAC</p> <p>School Administration (On-campus only), School ILO/Focal Person</p> <p>Military Colleges/ILOs</p>
5.	<p>Transport Arrangements/Logistics</p> <p>a. For transport and security arrangements, the Schools will communicate the requirements to NUST Main Administration Directorate.</p> <p>b. NUST Main Admin Dte and School/College Admin to ensure the following for on-station and out-station visits:</p>		<p>P&R Sectt (NUST Main Admin Dte), School Administration, School ILO/Focal Person</p>

	<p>i. Transportation arrangements for pick & drop of students from School/College to the Industry on the intimated dates and time.</p> <p>ii. Date and arrival time of each visit would be communicated by ILO as and when visits are planned and finalized.</p>		
6.	<p>Feedback and Reporting To submit Post Industry Visit Report on behalf of the institution, Faculty Post Visit Report and to ensure Student Post Visit Questionnaire is duly filled and uploaded on SIVA for the given semester.</p>	At the end of every visit	Faculty/ILO assigned for a particular visit
7.	Write up along with high resolution photographs for the visits in a given semester to be shared with CAC Office and M&C Dte for various NUST publications/news announcements on NUST main website.	Upon completion of every visit	School ILO/Focal Person, Faculty
8.	To share feedback of the visits for a given semester, if any, relevant to the KPIs of NUST Offices, including but not limited to; NUST Placement Office (NPO), Research and Business Development Offices etc.	2 weeks after end of every semester	CAC

Post Industry Visit Report (to be submitted by the Department / Institution)

Institution Name: _____

Organization/Industry Name: _____

Number of Semester: _____

Number of Batches: _____

Total Number of Students: _____

Number of Faculty Members / Staff: _____

Note: Details of students and faculty members to be annexed with the post-visit report

1. What learning objectives were achieved during the visit?

2. Highlight some key issues that students were able to address during and after the visit.

3. Were students able to link the technical knowledge demonstrated during the visit with their respective course(s) and theoretical concepts? Please elaborate

4. Elaborate on the possible areas of collaboration with the visiting industry (joint research projects / and other specific areas discussed during the visit)

5. In context to the visit conducted, highlight some areas of improvement for effective implementation in the future.

Institution Name: _____
Student Batch: _____

Student Post Visit Questionnaire

Student's Name: _____ **Enrollment #** _____

Semester: _____

Note: Please visit the website of the **industry** before going & familiarize yourself with the organization. Return this questionnaire to the accompanying faculty immediately on your return.

1. Name of the **industry** visited _____ Date: _____

2. Nature of **industry**'s ownership
 - a. Govt
 - b. Semi Govt/ Corporation
 - c. Private
 - d. Public Ltd
3. Nature of the product / services provided by the **industry**.
 - a. Mass Produced parts
 - b. Customized /made to order
 - c. Consultancy/ Training
 - d. Process Industry
4. Nature of Processes
 - a. Manual
 - b. Semi automatic
 - c. Fully automated
5. Quality Assurance functions
 - a. Manual
 - b. Semi automatic
 - c. Fully automated
6. Material Handling methods
 - a. Manual
 - b. Semi automatic
 - c. Fully automated
7. Nature of Production Planning and Control
 - a. Manual
 - b. Semi automatic
 - c. Fully automated
8. Human Resource Development functions
 - a. Primitive
 - b. Moderately developed
 - c. Strong
9. Health, Industrial Safety & Environmental awareness
 - a. Neglected
 - b. Partial awareness
 - c. Moderately aware
 - d. Fully aware
10. R&D Setup
 - a. Manual
 - b. Semi digitized
 - c. Fully digitized
11. Cost Accounting techniques
 - a. Primitive
 - b. Moderately developed
 - c. Strong

12. Employee Welfare System
 a. Primitive b. Moderately developed c. Strong
13. Adherence to International Standards
 a. Primitive b. Moderately followed c. Strongly followed
14. Marketing functions
 a. Primitive b. Moderately developed c. Strong
15. Inventory Management System
 a. Primitive b. Moderately developed c. Strong
16. Was this your first Industrial Visit? If not, mention the number of visit conducted
 a. YES
 b. No

17. How was your experience during the visit?
 a. Exceptional
 b. Very Good
 c. Good
 d. Average

18. What did you learn from the visit?

19. Please share the departments/sections of the Industry visited?

20. Your overall satisfaction level for the visit (please tick)

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
----	----	----	----	----	----	----	----	----	-----

Not Satisfied

Fully Satisfied

(If 6 or below then please mention the reason)

Institution Name: _____

Faculty Post Visit Report

Name of the Instructor: _____ **Dept:** _____

Industry / Organization Visited: _____ **Date:** _____ **Time:** _____

1. How was the conduct of the students:-
2. Arrival of the students a. On time b. Late
3. Availability of transport a. On time b. Late
4. Arrival at destination a. On time b. Delayed due to

5. Preparation by the visiting industry? Please rate/comment your experience. Tick the appropriate field (**Rating Scale: 1=Very Low, 2=Low, 3=Medium, 4=High, 5=Very High**)

<i>Weightage</i>	<i>Rating (Tick Accordingly)</i>				
	Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Adequacy of conducting staff					
Time duration allocated for the visit					
Depth of information conveyed to the students					
Other administrative arrangements by the industry					
Potential of joint research / collaboration with the visiting industry?					

6. Any other suggestion for improving the conduct of the visit.
