

External Experts Feedback

The Experts are requested to provide their assessment on the following dimensions:

1. Vision of the department and suggestions for future growth, both short and long term.
2. Quality (depth, breadth, relevance, adequacy, methodology, logical progression, link to industry/research, novelty) of academic programme and teaching.
3. Level of Research: Breadth, width, impact, relevance, uniqueness, leadership, national/international stature/reputation.
4. Facilities: Infrastructure, machines, teaching labs, research labs, staff quality log book, student/scholar participation, modernity and status compared to best international facilities.
5. Output: quality/quantity of publications, patents, UG/PG/PhD thesis, books, reports.
6. General reputation (of department) teaching, faculty, students, alumni, contribution to industry, nation projects.
7. Level of collaboration: national and international.
8. Strengths and Weaknesses – faculty, students, labs, infrastructure.
9. Suggestions for future growth of the department: short-term/long-term.

The feedback will be in **two parts**:

The **1st Part** will be in the form of a score sheet on several parameters and feedback sheets on individual, while in the **2nd Part**, the experts will provide a detailed qualitative report on the above dimensions including suggestions for improvements.

External Expert's Report (1st Part)

Name of the Department	DEPARTMENT OF ENVIRONMENTAL SCIENCE & ENGINEERING
Name and address of the institution	INDIAN INSTITUTE OF TECHNOLOGY (ISM) DHANBAD
Dates of the visit	31 October 2022
Name, designation, and affiliation of programme Expert	1. Prof Saumyen Guha, Department of Civil Engineering, IIT Kanpur 2. Prof Suparna Mukherji, Department of Environmental Science and Engineering, IIT Bombay 3. Prof Arvind Nema, Department of Civil Engineering, IIT Delhi

Score Sheet

- On each of the following parameters, a grading as per the given scale (1 = Poor, 2 = Average, 3= Good, 4 = Very Good, 5 = Excellent).
- The Expert may choose any score in between 1 – 5.
- Attributes are indication for the areas of evaluation or assessment.
- Feedback (in terms of score) from the Experts will be shared with the Department without disclosing the identity of the Expert Member.

No.	Parameter	Attributers	Score Scale
1	Teaching programme	Regularity, methods, lecture plan, Syllabus, Teaching aids and Supplements, Reference materials, Pace of teaching, Mentoring/ Authoring, Numerical/ Analytical problems, Research (thesis/non-thesis) component, Scope for academic rehabilitation for weaker students, Pace of learning.	5
2	Academic curriculum	Breadth, Depth, Relevance to research/industry, contemporary/modern, logical progression, Number and variety of electives, innovative components, New/pioneering courses/ Flexibility in terms of minor/double major/dual degree.	3.5
3	Laboratory/experiments, Assignment and exercise	Design and quality of experiments, Relevance, Theory and introduction lectures, Level of student participation (hands-on training) Grading, Standard of machines/equipment, Model experiments, Report writing/submission mechanism, Evaluation process, Attendance level	5
4	Learning methodology aids	Books, Reference, Library, Slides, Tutor, Question Paper, Tutorials, Type of assignments, Computer/net/video library/web-based aids, Archives for reference, Aid for slow paced learning, Scope for improving communication skills.	4

No.	Parameter	Attributers	Score Scale
5	Grading/ evaluation system	Realistic or irrational, Paper checking/sharing, Awareness Grading process and transparency, Record keeping, Uniformity (year to year; teacher to teacher), Assignment quality and frequency, Tutor support, Student feedback system, Stress on attendance	5
6	Faculty quality	Academic credentials, Teaching experience, Research output, Age/competence profile, Articulation, Thesis and project supervision records, Peer recognition and awards, National/International stature, Vision and Philosophy, Office and laboratory space management, Reputation among students/scholars/colleagues	5
7	Research contribution	Quality, Quantity, Impact, Perception, Patent, Novelty, Standard of facility, Research plan/vision, Translational research, Creation of faculty company (start-up), industrial collaboration.	4.5
8	Sponsored Research	Quantum, Source and type of funding, Level of support provided to students and infrastructures, Uniqueness of facility created, Regularity and continuity, Creation of national facility	4.5
9	Industrial consultancy project/ EDP courses/ Outreach programmes	Quantum, source and type of funding, level of support provided to students and infrastructures, uniqueness of facility created.	4

No.	Parameter	Attributers	Score Scale
10	Collaboration Within or Outside IIT(ISM) Dhanbad	Number, type and quality of collaboration with academia/R&D/ Industry at national or international level, Project funding (joint), Organization of meeting/conference, Joint supervision of students/ projects/ thesis, Special (executive) courses for industry Level and Impact of output from collaboration.	4.5
11	International Component and connection	Number/type/frequency of international students, scholars, Visitors and projects, Collaboration, Exchange program, international events organized, MoU/MoA, Foreign visits of IIT(ISM) students/scholars, faculty members, International Mobility/Projects/Fellowships.	4
12	Ambience/ Atmosphere in the department	Levels and effectiveness or collective initiatives, Publicity and information materials, Teacher-student relationship, Scholar-Supervisor relationship, Overall ambience of the department.	4.5
13	Infrastructure (General)	Classroom, Seminar halls, Laboratories, Workshops, Faculty offices, Research Scholar offices/space, Laboratory Safety	4

No.	Parameter	Attributers	Score Scale
14	Student quality (UG/PG)	Academic background and progress, Level of motivation and interest in core subjects, Depth of understanding, Interests and hobbies, Discipline, Future ambition, Communication and comprehension skills, Degree of satisfaction about academic and extra-academic standards.	4
15	Student quality (PhD Scholar)	Level of understanding in core area, Exposure in core specialisation, Quality and quantity of research output, Average time for PhD, Motivation and interest, Discipline, Articulation (Communication skill), Ambition, Awareness, National/International exposure, Leadership quality.	4.5
16	Employability of students and scholars	Companies, Statistics, Student or employer feedback, Salary/perks level, Pattern of employment or placement, Job distribution among UG/PG/PhD students, Relation between elective/training and employment, Relation between academic performance and employment.	4
17	Number, location, sector and professional success profile of alumni, Contribution	Number, location, sector and professional success profile of alumni, Contribution of alumni to his/her profession and society, Alumni-IIT(ISM) link/bond, Participation in or contribution to alma mater, Alumni feedback, Famous alumni and their profile.	4

No.	Parameter	Attributers	Score Scale
18	Scientific or Engineering contribution to National/ Society	Quality of academic (non-degree) programs, Short courses, Training, Refresher courses, Societal projects, Large/mega project (product/process), Contribution to strategic sectors (Nuclear/Defence/Space/Energy), Partnership with industry (private/public sector), Quality and reputation of alumni, Academic contributions and impact (publications, book, patents, products).	4
19	Overall Reputation and Standing (national)	General impression about this Department in the country (teaching, research, faculty, staff, students, alumni, research/academic output, peer recognition, technical expertise, infrastructure, Atmosphere and Vision	4.5
20	Overall Reputation and Standing (International)	General impression about this Department: Teaching, Research, Faculty, Staff, Students, Alumni, Research/Academic output, Peer recognition, Technical expertise Infrastructure, Atmosphere and Vision.	4.5
Overall feedback and suggestions		<p>The undergraduate program in Environmental Science and Engineering is one of the oldest in the country.</p> <p>The department has a set of faculty members who are working on diverse research areas of regional and national importance.</p>	

No.	Parameter	Attributers	Score Scale
		<p>The department needs to re-emphasise their focus on applied research focusing on addressing the problems faced by the mining and other industries.</p> <p>Majority of the faculty members and research scholars are doing experimental work. Therefore, maintaining the advanced instruments is a priority.</p> <p>Curriculum (UG and PG) needs to be reviewed keeping in view the traditional strength of IIT (ISM) Dhanbad as well as emerging areas of environmental concerns.</p>	



(Prof Saumyen Guha)

Nov 08, 2022



(Prof Suparna Mukherji)

Name and Signature of the Experts



8/11/2022

(Prof Arvind Nema)