ANNUAL PROGRESS REPORT: IoE Scheme 2020-21

Institute of Eminence Cell
Indian Institute of Bombay

March 31, 2021
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Research related:

WCRL
- Following World Class Research Labs are being setup and these under different stages of progress.

<table>
<thead>
<tr>
<th>Lab Name</th>
<th>Budget allocated ₹ (Cr)</th>
<th>PR created (No)</th>
<th>Amount of PR ₹ (Cr)</th>
<th>PR approved (No)</th>
<th>Amount of PR approved ₹ (Cr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nano Science Nano Fabrication &amp; Characterization</td>
<td>260</td>
<td>9</td>
<td>50.80</td>
<td>8</td>
<td>34.96</td>
</tr>
<tr>
<td>Manufacturing and Materials</td>
<td>30</td>
<td>24</td>
<td>35.43</td>
<td>16</td>
<td>15.52</td>
</tr>
<tr>
<td>Health Sciences and Engineering</td>
<td>35</td>
<td>11</td>
<td>27.87</td>
<td>11</td>
<td>27.87</td>
</tr>
<tr>
<td>Data and Information Science</td>
<td>50</td>
<td>9</td>
<td>31.30</td>
<td>4</td>
<td>9.28</td>
</tr>
<tr>
<td>Sustainable Chemical Sciences</td>
<td>50</td>
<td>11</td>
<td>24.86</td>
<td>9</td>
<td>11.47</td>
</tr>
</tbody>
</table>

Further process related to placement of Purchase Order (P O) is held up for want of GTE clearance from MoE, for which action is under progress.

Central Research Facilities
- Towards augmenting central research facilities, an amount of ₹122.42 Cr have been earmarked for infrastructure funding. High end research equipment is being procured under this scheme. As on date 45 projects are under various stages of completion. In this direction 107 Purchase Requisitions worth ₹104.94 Cr have been created and 49 Purchase Orders issued. Action under progress related to 58 PR.
Data Centre
- A central facility of Data Centre housing BYOH and HPC is under commissioning. Towards this purchase requisition worth ₹20 Cr is approved and RFP already floated and tender under finalisation.

Post-Doctoral Fellows
- 112 IPDFs joined during Jan-Mar 2021 taking the total number of IPDFs to 340. Approval obtained to appoint IIT B PhD holders as Institute PDF to meet the increased research activities in various laboratories. This has helped in substantially increasing the number of PDFs, thus helping research activities.

Patents
- There is an increase of 68% in IP filing. 262 IP filed in 20-21 against 156 of 19-20. (163 patents, 88 trade marks and 10 design registration). Number patent granted during 20-21 is 120 against 67 granted in the year 19-20

Programmes with Social impact.
- Due to the COVID 19 situation, there were Severe constraints for field work. Nonetheless, CTARA conducted various training programmes/workshop having social impact, IDP in climate studies and CSRE are doing research related to climate change and its mitigation, BSBE started study on bacterial infection after respiratory viral infection in collaboration with University of Liverpool, UK., Earth Science conducted research on clay minerals as alternative fertilizers, CUSE developed a low cost solution for improving water supply in India that will solve issues faced by Rural and Urban local bodies.
- 84 students whose parent’s yearly income is less than 1 Lakh were given admissions through Right to Education as per the names sent by Education Department, Government of Maharashtra and 270 students with economically poor background were given admissions with the payment of affordable yearly fees to Campus School.
Student related:

- IIT Bombay runs various academic and research programmes in the areas of management, design, economics, and policy etc., thus making the institute truly multi- and interdisciplinary.

- Multiple entry schemes already exist in the Institute.

- Number of foreign students – 103. Percentage of foreign students – 0.85%. Difficult to increase this number substantially in the current year due to COVID 19. IITB is working with government agencies such as Study in India (SII), ICCR, IIT Delhi (ASEAN PhD fellowships) in their outreach and admissions activities for recruiting international students at the master’s and PhD levels.

- Approached Universities in 6 countries viz Sri Lanka, Nepal, Bangladesh, Ethiopia, Indonesia and Thailand with an intention to enhance information availability and publicity to attract students from those countries. 10 other countries will be covered during the year. Target universities with whom we have MoU is also being contacted.

- Student enrolment in various courses is 12005 as on 31 Mar 2021.

- Scholarships and financial support are being made available to all needy students. During the year 2019-20, 3209 students were provided with scholarship amount in Rs 82.77Cr and 106 students were awarded with Rs 10.31 Lakhs. In the quarter Oct-Dec 2020, 14.77 Cr worth scholarships awarded to students.

MoUs with other Universities.

- We have entered MoU with various top ranked universities. Total number of MoU is 177. Three MoU signed with Technische Universitat Ilmenau, Germany, Lehigh University, USA and Kytoto University, Japan during Oct-Dec 2020 and Four MoU signed during Jan-Mar 2021.

Hostels

- Construction is ongoing for Hostel 17 with 1115 rooms. Architect appointed for Hostel 19 which will have 1115 rooms and it is also proposed to place contractor for the same by Jul 21. Parallel attempts are being made to construct three blocks each having 550 student capacity with alumni support at hostel 8 location. In addition, there will be 150 + rooms
with common kitchenette facility to accommodate foreign students. In order to top up accommodation requirement for girl students, new hostel building (hostel 20) with 1000 rooms is being planned and slated to be tendered by Sep 1, 2021. In addition Student Activity Centre (SAC) DPR is completed and Purchase Requisitions under process.

Faculty student ratio
• Recruited 14 numbers of faculty during the calendar year 2020. Total number of faculty as on 31.03.2021 is 686 out of which 98 are female faculty members. Current student faculty ratio is 1:17.5.

Foreign faculty
All heads have been told to be pro active and try to get at least one international faculty and one international PDF each in the year 2021.

Academic related:
• Multidisciplinary focus: A proposal for liberal education UG programme was approved in principle by senate in their meeting held on 27th Dec 2020. Further action under progress.
• Interdisciplinary courses: Centre for Machine Intelligence and Data Science (C-MInDS) started in February 2020 to offer Minor in AI and Data Science and Inter Disciplinary Dual Degree Program (IDDP) in AI and Data Science.
• IDC programme in animation supported by I&B ministry approved.
• B S in Mathematics by Department of Mathematics, Dual Degree (B. Tech+ M. Tech) in Environmental science and engineering by Environmental science and engineering department were started in 2018.
• M. Tech in Education Technology by Education technology department, Master in policy studies by Policy studies Centre, and Master in Urban design and engineering by Urban design and engineering Centre were started in 2019.
• M.S. By Research in Computer Science & Engg. By Computer science and engineering department, Dual degree (MA+ PhD) in Humanities & social Sciences by Humanities and social sciences department started in 2020.
• IDDP MTech in AI&ML under CMInDS started.
• Senate in its 247th meeting approved IDDP(BTech/BS+MBA) in Management and will be effective from academic year 2021-22.
• Number of interdisciplinary centers and school: BoG approval take for Centre for Machine Intelligence and Data Science (CMInDS) offering Minor in AI and Data Science and Inter Disciplinary Dual Degree Program (IDDP) in AI and Data Science setup in February 2020.
• New Department and Centers: Education technology department created and started to offer PG level courses. Urban design and engineering and policy studies are two centers created in 2019 and offering courses at the PG level.
• Research labs: During the year 2020-21, four new research lab added thus making total research labs in academic departments to 229.

Library related:
• Number of books holding in our central library has increased to 2,49,100 and journals to 20,600 and thesis and dissertation to 25,00,000. During the year 2020, ₹14.2Cr used to purchased books, journals, and databases. 672 books purchased and 20,600 journals subscribed during Jan-Mar 2021.
• Peer Reviewed publications: Total number of peer reviewed publications are 796 during Jan-Mar 2021. Number of publications per faculty is 1.1. Number citation per faculty is 40.5 during Jan-Mar 2021.

Overall:
• World Ranking: QS ranking – 172.