IEOR@IITB

Industrial Engineering and Operations Research Academic Review
Executive Summary presented to IITB BoG

Review Committee

Professor M. R. Rao, Dean Emeritus, Indian School of Business, Hyderabad and Professor Y. Narahari, Professor and Chairman, Computer Sc. and Automation, Indian Institute of Science, Bangalore. The Review was conducted on 30th January, 2014.

Review material

Details, including relevant data, of the following aspects is provided to the Committee. In addition to the data in the Institute format, a detailed report is also provided.

- The three academic programmes offered by IEOR, IITB: M.Tech.(IEOR), Ph.D. and M.Sc.-Ph.D. Dual Degree in Operations Research
- The current strength: MTech − 40, Ph.D. − 28, MSc.PhD. students doing coursework − 25.
- Faculty base: Eight faculty members, their academic profiles, etc.
- Time-line of IEOR, highlighting major events during the Review period like induction of new faculty members in 2008 and 2012, introduction of M.Sc.-Ph.D. programme in 2009, etc.
- Popularity of IEOR courses in Institute (the total registrations of IE courses in each semester has crossed 500 in recent years)

Review process

- Meeting with Director ($\sim 20 \text{ mins}$)
- Overview of IEOR by Convener and related discussion (~ 2.5 hours)
- \bullet Presentations, followed by discussion, by 5 faculty members of their Research and Teaching activities (~ 2.5 hours)
- Short presentations by 9 senior PhD students (~ 45 minutes)
- In confidence meeting with all IEOR students (~ 45 minutes)
- Final Meeting with Convenor (~ 30 minutes)

Major recommendations

The quantitative report was filed by the Committee on the Academic Review day; a detailed qualitative report was emailed to us during the next week following discussions among the Committee members.

Quantitative feedback

- Scores on most parameters are 9's and 8's with occasional 10's on aspects like Research ambience, Quality of work, Faculty hiring, Placement of M.Tech. students.
- Lower scores of 6s and 7s on aspects like peer-based learing, communication skills, impact of publications, available infrastructure, etc.

Qualitative feedback

Significant comments include:

- (M.Tech. programme) Mentoring of TAs, more courses in Industrial Engineering area, announcement of electives in advance, etc., are needed.
- (Doctoral programme) More course work, suitable internships, better communication skills, are recommended.
- (Research) Possible areas for recruitment of faculty (some already listed in current faculty advertisement), need for a strong publication culture.
- (Infrastucture) Urgent need for additional space for Ph.D. students, visitors, etc.
- (Admission and Recruitment) Identify suitable M.Tech. students for Ph.D. enrolment.
- Additional (important) comments
 - 1. Benchmark with some worldwide well known programmes (say, with the one at Lehigh Univ.)
 - 2. Embark on a big project, as a group.
 - 3. The FOSSEE initiative is laudable; should be scaled up.
 - 4. IE and OR should become a department so that it will get better visibility.
 - 5. The faculty have capability to achieve international recognition; this should be pursued vigorously with Institute's support.

Looking ahead–Mission 2020

"IEOR aspires to be a full fledged department; attract excellent faculty members and grow to about 15 faculty members in the next 5 years; consolidate various activities, including the doctoral programme."