

## British Council Services for International Education Marketing India

Engineering mission

Bangalore and Mumbai

7 to 11 September 2015

The Engineering subject mission was designed to provide a platform for UK and local higher education institutions to interact and develop potential partnerships in Engineering with the further objective of promoting research collaboration in engineering related courses between the two countries.

Local institutions that offer engineering courses in India are actively exploring partnerships and collaborative opportunities with UK institutions. This five day programme included visits to five higher education institutions in Bangalore and four in Mumbai to explore these potential collaborations.

The programme included faculty interactions in order to understand the key areas of interest for collaboration and partnerships between academics of both countries followed by interaction with prospective students at each local institution to showcase the quality, range of courses and career prospects of engineering courses in the UK. The sessions were delivered to pre-final year and final year engineering students.

At each local institution the group was split as below to deliver seminars

Classroom 1:

Dr Peter Wardle (Fundamentals of Finite Element Method in Stress Analysis)

Graham Ford (The influence trees have on foundation design)

Classroom 2:

Dr Peter Aaen (Tomorrow's Mobile Network, Today's Challenges)

Dr David Tann (Structural Design)

Classroom 3:

Dr Anthony Joseph Beaumont (What do plants, shapers, and record cards have to do with successful Software Engineering?)

Steven Latta (Strategic Decision Making for Engineers)

There was participation from the following 6 UK institutions:

## LIST OF PARTICIPATING UK DELEGATES

UK Institutions
Aston University
University of East London
Glasgow Caledonian University
Staffordshire University
University of Surrey
University of the West of Scotland

Day 1: AM: Visit to [PES University](#) (People Education Society)

PES University stands for People's Education Society, which was a state private university until 2013. Post 2013 the institution received a University status by UGC. They run 7 Engineering programmes and have an annual intake of 1000 students. Students studying at PES University have a mandatory deliverable of carrying out research / application based research during their 8 semester course. Funding is received from the university as well as central government to carry out research activities. PES University has 4 main research domains and one of the projects 'Tech equip' was funded by the World Bank. The popular subjects at PES University are MBA, Computer Application, hospital/hotel management and Engineering and Biotechnology are the most popular subjects.

The summary of the faculty discussion is as below:

- Both UK and Indian academics were keen to work on integrated programmes where students complete 3 years in the UK and 2 years in India to receive MEng degree.
- Both UK and Indian academics were interested in Research collaboration for forensic science and food technology.
- Development of curriculum on Health Science engineering and for Medical Diagnostic and Medical Engineering courses was discussed.
- There were discussions on internship programmes in the UK, including scholarships and funding.
- PES University expressed interest in releasing joint-publication by India and the UK.

Number of students met: 250

Key contacts/faculty met: 15

Day 1: PM: Visit to [Alliance University](#)

At Alliance the delegation first addressed the students and delivered seminars which were followed by faculty discussion. During faculty discussion Alliance University informed the group they are very keen on developing partnerships immediately. The director of the institution engaged with the delegation by providing information about the various Education systems in India which includes state level colleges, central universities, deemed-to- be universities and deemed universities in India.

The summary of the faculty discussion is as below:

- Credit transfer model where a student completes part of their under graduation in India and transfers the credit to continue their studies in the UK.
- To start integrated master's programme in some subject areas such as Computer Science engineering, Electronics Engineering, BIS data, Cloud computing, Atomic Engineering. Since Alliance University is going to start a new programme in Computer Science Engineering, they are keen to develop partnerships with UK universities at the earliest.
- Alliance University informed that they are keen on developing a 2+2 programme or a dual degree programme with the UK universities.
- The delegation suggested a model of 3+1+1 where a student studies for 3 years in India and one year in the UK and the last year is completed in India.
- There was discussion about the Erasmus-mundus funding for Indian students

- Summer school programmes for students for 2-3 weeks in the UK was discussed. The UK delegates suggested that July will be suitable period for summer programmes. Alliance University also offered a flying faculty to visit their campus and teach students for a couple of weeks in India.

Number of students met: 250  
Key contacts/faculty met: 10

#### Day 2: AM: Visit to [Christ University](#)

Christ College which started in 1969 offers science, humanities, and social studies courses in the college and is a deemed-to-be university. There are 114 faculty members and over 1600 students at Christ University.

The summary of the faculty discussion is as below:

- Christ University has collaboration with ISEP France where students' spend 7 to 8 months outside India for a project.
- Christ University runs a programme called University Gateway which is similar to flying faculty visit and they proposed the same to the UK delegates.
- Common research interest and research exchanges were discussed along with identification and validation of qualifications and course contents.
- Christ University is interested in starting the collaboration as early as November where students' can visit the UK for project work.

Number of students met: 350  
Key contacts/faculty met: 10

#### Day 2: AM: Visit to [MS Ramaiah Institute of Technology](#)

The summary of the faculty discussion is as below:

- At MS Ramaiah Institute of Technology, the principal was more keen on developing research partnerships rather than students exchange
- The delegation found similar areas of where they may like to partner with MS Ramaiah Institute of Technology on various subjects such as wireless network, solar energy, water supply, nano science and are interested in joint- research or research exchange programmes.
- There are 16 members who are currently carrying out research at MS Ramaiah Institute of Technology and are interested in faculty exchange programmes


Number of students met: 250  
Key contacts/faculty met: 10

#### Day 3: AM: Visit to [REVA University](#)

The faculty discussion at REVA University was chaired by the Chancellor and other faculty members from the engineering department.

The summary of the faculty discussion is as below:

- REVA College received its University status 3 years ago. They are keen on developing partnerships with UK universities. The chancellor informed the delegates that they want to materialise the partnership at the earliest.
- The University has plans of opening another campus which will specialise in medical studies.
- The University is open to collaborate on study abroad programme, student exchange programme, research exchange specially in the computer science department



Number of students met: 400  
Key contacts/faculty met: 10

On the evening of day 3, the delegation left for Mumbai.

Day 4: AM, visit to [D J Sanghvi College of Engineering](#)

The delegation was met with by the Head of Department of Mechanical Engineering, post this the delegates delivered guest lectures in three different classrooms.

This was followed by a meeting with the Principal and some other key faculty members in the principal's cabin. During the discussion the following was highlighted:

- DJ Sanghvi college of Engineering offers 8 streams of engineering at UG level and 3 streams of engineering at PG level. There are 2800 students studying at this institution. Most students are from Mumbai city. All degrees for students are awarded by Mumbai University and are governed by UGC and AICTE guidelines. The college will apply for autonomy next year.
- 50% students opt for overseas education and most of the students look at studying Computer Engineering
- 50 % stay back to either get work placements or study management or masters in engineering mainly applying to institutions like IIMs and IITs

There were conversations around the feasibility of:

- Curriculum exchange
- Research exchange
- Staff exchange
- Student exchange
- Semester exchange / credit exchange
- Scope for combined research programmes

The Principal explained the existing Mumbai University working process and programmes are governed and affiliated to various organisations like NBA (National Board of Accreditation), UGC (University Grants Commission), AICTE (Government of India, All India Council for Technical Education), Mumbai University, NAAC (National Accreditation Assessment Council). The college needs to get the approvals from the various governing bodies for any kind of research tie up or curriculum exchange even if they are interested in the same at the moment.

All delegates were of the opinion that smaller exchanges are possible but they need to be part of a larger MOU (eg. faculty exchange etc.). There was also conversation around how one needs to deposit a large amount of money with AICTE before one can start any kind of twinning program

Number of students met: 150  
Key contacts/faculty met: 7

Day 4: PM, visit to [Sardar Patel Institute of Technology](#)

This was followed by a faculty discussion session in the conference room where the Vice Principal introduced the group and the institution highlighting the following:

- Courses in Computer / Electronic / Telecom / IT are offered by Sardar Patel Institute of Technology
- It is a self-financed private institution but a college that is affiliated to Mumbai University and have applied for Autonomy

Faculty then discussed the feasibility of the following:

- Sharing expertise especially for research projects
- Summer internship programs. Collaborative programs / joint research projects especially at PG level
- For Post Graduate students – one year project work (as the Indian masters is for 2 years, for the first year the students are at the institution but in the second year they are on project work)
- The college can offer online programs or a model that can be delivered here in local classes. They can also offer part time PhD (6 year) programs where students need to visit the UK institution only for around 6 weeks in a year.
- The college also discussed summer school programs of 3-4 weeks that can add value to current degrees
- There was a discussion that summer school programs can include local sightseeing, series of lectures on topics not on syllabus but relevant to the students.
- Another discussion that took place was around waiving fees for 1 PhD student for every 10 PG students; so instead of paying the agents they pass it on to the institution who can then use it as they want to.

Number of students met: 180

Key contacts/faculty met: 5

Day 5: AM , visit to [Somaiya College of Engineering](#)

The summary of the faculty discussion is as below:

- 3000 students are on campus of which 2600 students do the UG program and 400 study the PG program. The students work on special independent projects such as building all-terrain vehicles / formula race car prototypes which have won prizes at the international level. They are autonomous and can frame syllabus and credit equivalence under the given guidelines
- Students are also active in additional technical activities which are not part of the curriculum but still find support from the management such as robotics / aerospace modelling
- Some of their computer students also assist the anti-corruption bureau and police department with their back end programming work.
- The management supports research in innovation and incubation projects in mechanical / electronics / inter-disciplinary programs
- They have a tie up in Germany where the students spend 2.5 months during their summer break here and earn credits that are easily transferred here and the management is supportive of such programs
- Their main vacation period is between 15 November – 1 week January and between 15 May - 15 July. In case students need 15 more days the management is supportive and ensured that Summer school options can be worked out during the vacation time. It can be a 6-10 week program
- The college would be interested in interchange of faculty for some modules for a period of 2 weeks and also interested in additional research activity
- The college mentioned that credit transfers are easily possible as the syllabus is to be approved by the subject board and is possible more at UG level
- At PG level as the students have 1 year of academics and the second year of industry / project based work, something can be looked into for the second year (industry placement etc.)
- The college is happy to start with smaller but definite projects / collaborative work and then can progress to bigger collaborations as they need more legal understanding and signing of MOUs
- The Somaiya trust is very supportive of new initiatives, however some of the aspects are not within the purview of the Principal and needs more time and understanding especially if one is looking at twinning programs / 2+ 2 programs / double degree programs which requires a management and university board approval
- The management gives all faculty a partially paid one year sabbatical for their PhD programmes

Number of students met: 180

Key contacts/faculty met: 15

## Day 5: PM [Mukesh Patel School of Technology Management & Engineering](#)

The delegates were welcomed by the Dean of who introduced their group and institutions within the same. Highlights of his discussion were as follows:

- Mukesh Patel school is a private University since 2006. They have 20 software internships with Aston University
- The college is interested in inter-disciplinary association (computer / maths) (business / software development) and faculty exchange at PG and research level. The college is also looking for joint research collaborations
- The college is interested in student exchange at a very basic level. They are currently bidding for the Newton Bhabha fund project and talks are on with Cranfield University who are their partners for the pilot project
- They have connected with the local industries for students:
  - L&T - in the automotive and mechanical field assist for defence automation
  - Capgemini for Big Data projects
  - Thermax – renewable energy / sustainable energy projects
- Thus the college is interested in sharing research collaborations and project based course with UK partners and is hoping to develop faculty competencies; so they have a 1 week course on faculty development with the University of Cranfield
- The college is looking for summer courses with international exposure in the field of automation and robotics. They are interested in knowing more about the 2 year extended PG program for international students

Number of students met: 125

Key contacts/faculty met: 8

### **Total Audience**

Total students met during the mission	2135
Total faculty members met during the mission	90

### **Feedback received from participating delegates**

- 100% participants 'agreed' that the quality of institutions, interaction at each institution and content of the programme was 'Good'.
- 75% participants mentioned that the support provided by the British Council was 'excellent'
- All participants 'agreed' that the mission met their expectations and 75% 'agreed' that they have acquired market intelligence about institutions in the cities through this mission.

**Photographs taken at each institution**

D J Sanghvi College of Engineering



Sardar Patel Institute of Technology:



Somaiya College of Engineering:



Mukesh Patel School of Technology Management & Engineering:



Delegates delivering a master class to students at PES University in Bangalore





Dr Peter presenting to the faculty during faculty discussion



Faculty discussion at Alliance University

**To know more about the upcoming subject missions, please contact:**

Shruti Khanna  
Senior Manager SIEM India  
British Council Mumbai  
[Shruti.khanna@in.britishcouncil.org](mailto:Shruti.khanna@in.britishcouncil.org)  
+91 (0)22 6748 6715