

FOUNDATION PROGRAMME 2011

(19th July – 23rd August 2011)

Introduction

Increasing complexity and inter-dependence among societies and countries have meant that there is a greater need to understand the political, social, cultural, and economic overtones that dictate our lives. This is especially important in higher technical education because engineering students of today will be the leaders of tomorrow – in both, technical as well as non-technical fields. With increasing trade and connections between economies, the graduates of Indian Institutes of Technology across the country have been getting placed in organizations with a non-technical job profiles (banking, software, business consulting etc.). This again requires the students to be well-rounded and more aware of their local and global surroundings. Most importantly, the goal of education is to create thinkers and scholars who are able to reduce complex real life problems in all domains to simple problems, and make appropriate choices which are most beneficial for the society.

With this background Indian Institute of Technology Gandhinagar (IITGN) introduced a 5-week orientation program (called Foundation Program) for all its entering students in July 2011. The Institute was established by Government of India in 2008, and currently offers Bachelor of Technology degrees in Chemical, Electrical, and Mechanical Engineering. The strength of the incoming class to the Institute is 120, and various faculty, staff, and student volunteers from the Institute were involved in developing and running the program. This article is to share the experiences and learning from the Foundation Program.

Objectives of the Foundation Program

The deliberations over introduction of a Foundation Program for the incoming class started at the Institute in early summer. Over the summer, the team responsible for the Foundation Program came up with the following objectives that we wished to address through the program:

1. *Well-rounded individual*: Prepare well-rounded individuals aware of and sensitized towards their local and global surroundings.
2. *Discover their passions*: To help the students discover areas and ideas that they are passionate about, and provide them with avenues to explore these areas.
3. *Values and ethics*: Focus on inculcating values of both, being an IITGN student and a global citizen, into the students.
4. *Foster creativity*: Provide a channel to the students to exhibit and develop their creative skills, and to express themselves through art, craft, drama, media etc.
5. *Instill confidence*: Inculcate a sense of confidence and be fearless in pursuits of justice, equality, and fighting discrimination.
6. *Team-work*: Develop a culture of team-work. A culture of cooperation, rather than competition.
7. *Physical Activities and Sports*: Engage the students in sports and physical activities to ensure a healthy mental and physical growth.

It was also decided that the incoming class will be asked to report to the Institute 10 days ahead of the scheduled start of the semester, and get settled and started with the Foundation Program before classes began in the July – December 2011 semester. The Foundation program was scheduled to run from 19 July – 23 August 2011 (for 5 weeks), which meant that there were no regular classes for the incoming students for the first three and a half weeks into the semester. Their regular class load and schedules were appropriately handled and rescheduled.

Background Preparation

To achieve the above listed objectives, the major ideas of the Program were divided into baskets with well-specified objectives. The responsibility of then filling up a particular basket was given to one or two faculty members. The faculty members were responsible for designing, scheduling, arranging, and all other details related to all events in their particular basket. This ensured efficient division of work among faculty based on their interests and passions, and also allowed one person to be aware of all the events in a particular section. This ensured that, in one basket, a variety of events were well-represented. Our baskets were designed as follows:

1. Social Awareness,
2. Emphasis on Values,
3. Creativity,
4. Physical Activities and Sports, and
5. Team work and communication.

This being the Institute's first attempt at the Foundation Program, we were sure that there would be numerous learnings for all of us to come out of the program. Therefore, we designed a careful review system from the students to get to know what were their feedback and perceptions about the events in the Foundation Program at the end of each day. This feedback allowed us to reflect on important findings – some of which we were able to correct mid-course, while others were more-important lessons for future Foundation Programs.

A typical day of the students during the course of the Program started at 6:30 am when they reported for physical exercise for one hour. After breakfast, the mornings usually consisted of a couple of lectures and interactions with distinguished people from various fields. Activities were scheduled for the post-lunch session where the students delved into their creative side. This was followed by the evening sports from 5 – 6pm. The students were then allowed to pen their thoughts down and follow up on many of the things that they had discussed during the day, and the day concluded by a small feedback session where the students shared their excitement, concerns, joys with us.

Different Baskets (objectives) in the Foundation Program

Awareness

The years of preparation that the students entering IITs mean that they suffer on many fronts. This includes awareness of the local and global happenings, understanding of intricacies of national and international events, and a development of understanding of their role as citizens of India and the globe. Another aspect that we tried to highlight in the Foundation Program was access to issues of social justice and access to many people who have been fearless in their pursuits of justice, and taking on administrations, and governments in various capacities. The interactions in the basket of Awareness were of the following kinds:

1. *Lectures:* This included many prominent academicians, scholars, social workers among others to come and share their experiences. We paid special emphasis on trying to invite people who are leaders in their fields, but are also capable of igniting young minds to question, and follow up on some of the things that got talked about during the lectures. The activity was met with quite a success with the questions and answers post-lecture went beyond the stipulated time for the sessions. Through these lectures we introduced the students to many important issues in the country that often do not receive the attention they deserve. These included, sex ratio in the country, farmer suicides, farm sector in India, Right to Information, and many others as listed in Table 1.
2. *Visits:* We also arranged a number of visits for the students to get to know more about their local surroundings for the next four years. Ahmedabad is a fascinating 600 years old city, and to introduce the students to the city, one of the first things in the Foundation Program was a Heritage Walk to the old city. That was followed up with a visit to the Calico Textile Museum (as Ahmedabad was referred to as the Manchester of the East). Gujarat was also the house of the oldest civilization in the sub-continent, and to give the students a glimpse of this, the noted historian, Mr Michel Danino, took the students to the historical site at Lothal. Last, the students also spent a day at a closeby village where they collected data about the functioning of the Public Distribution System run by the Government. The idea was to not to make students just visit the village but spend their time at the village interacting with the people there, and also make a positive contribution to the same. The feedback from the students about the all the visits was full of excitement and enthusiasm.

Table 1: List of Activities in the Foundation Program under Awareness

| | Name | Title | Type of Activity |
|-----|---|---|-------------------------|
| 1. | Mr. Debashish Nayak | Heritage cities and Ahmedabad | Lecture |
| 2. | Heritage Walk, Ahmedabad | | Visit |
| 3. | Calico Textile Museum | | Visit |
| 4. | Ms. Kalpana Sharma | Gender Issues in urban India | Lecture |
| 5. | Dr. Sandeep Pandey | Right to Information in India | Lecture |
| 6. | Mr. Gunvant Jain | Teach for India | Lecture |
| 7. | Ms. Pratibha Pandya & Ms. Mumtaz Baloch | SEWA | Lecture |
| 8. | Prof. K. P. Jayasankar | Slums in Indian Cities | Movie Discussion + |
| 9. | Ms. Svati Bhogle | Technology and Grassroots Development | Lecture |
| 10. | Mr. Jaideep Hardikar | Farm Suicides in Rural India | Lecture |
| 11. | Mr. Devinder Sharma | Collapse of Agriculture Sector in India | Lecture |
| 12. | Prof K. N. Pannikar | Concept of India | Lecture |
| 13. | Mr. Michel Danino | Indus Valley Civilization | Lecture Series (3) |
| 14. | Lothal | Indus Valley Civilization Site | Visit |
| 15. | Rural Visit, and PDS survey | PDS: Public Distribution System | Visit |
| 16. | Mr. Arvind Singhal | What and how to read? | Lecture |

Emphasis on Values

The basket on values was divided into two distinct qualitative items. The first included sessions on values as a civil society member and a responsible citizens, and in the second we focused on certain grey areas of values, and how we need to be inculcate a critical thought process of our and other's actions around us. In the first section, we scheduled interactive talks by Prof Raj Chhabra (IIT Kanpur) who talked to the students about Professional and Personal Ethics, and Ms. Jasbir Thadhani who talked to the students about trying to identify the core values that define every unique individual.

The second session had deep interactive sessions with Prof Sudarshan Iyengar (Vice-Chancellor, Gujarat Vidyapeeth) and Mr. Amod Kumar (IAS) – the two held extremely engaging sessions with the students where they highlighted values and ethics beyond civic sense. They talked about the need to continuously introspect oneself, and hold close to heart Gandhiji's Talisman. Prof Iyengar and Mr. Kumar made a deep impact on the students about how they think about the role of education and how they perceive their roles as professionals of tomorrow.

Table 2: List of Activities in the Foundation Program under Values and Ethics

| | Name | Title | Type of Activity |
|----|--------------------------------|----------------------------------|------------------|
| 1. | Prof Raj Chhabra | Professional And Personal Ethics | Lecture |
| 2. | Prof Sudarshan Iyengar | Values and Education | Discussion |
| 3. | Cleaning Drive, Ahmedabad | | Visit |
| 4. | Mr. Amod Kumar | Values and Profession | Lecture |
| 5. | Ms. Jasbir Thadhani | Valuing the unique me | Discussion |
| 6. | Ms. Mina Das, and Ms. Mini Das | Violence against women | Lecture |

Creativity

Many of the students who enter IITs through the JEE have not really had the chance to explore avenues to find their true passions and interests. Many enter IITs purely because of societal and parental pressure, and because they have not been given room and time to explore and find their true interests. In this regard, the aim of the creativity basket was to provide the students an avenue to explore their creative sides, and also grow as professionals and human beings. In this regard, we organized many workshops at the Institute to allow them to follow up with their passions (active or passive). The number of activities (Table 3) arranged saw an enthusiastic participation from the student body, which also displayed their creations in the form of a Graffiti wall at the Institute, a cultural program at the end of the Foundation Program, free hand sketches and many more creations around the Institute. The details of the workshops organized as part of the Creativity Section of the Foundation Program are listed in the Table 3.

Table 3: List of Activities in the Foundation Program under Creativity

| | Name | Title | Type of Activity |
|----|-------------------------|-------------------------------------|------------------|
| 1. | Mr. Hersh Haladker | Technical Creativity and Innovation | Lecture |
| 2. | Freehand Sketching | | Workshop |
| 3. | Clay Modeling & Origami | | Workshop |
| 4. | Photography | | Workshop |
| 5. | Pt. Vishwa Mohan Bhatt | | Performance |

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|----|-------------------------------|----------------------|-------------|
| 6. | Arti Anklikar | | Performance |
| 7. | Cultural Program, students | | Performance |
| 8. | Mr. Anup Tapadia | Technical Innovation | Lecture |

Physical Activity and Sports

One of the major areas where the students suffer during the JEE preparation is physical well-being. Isolated from any physical activity, and often preparing for more than 10 hours every day, the physical well-being of the students is not where it should be. Believing that only in a physically fit body would a fit mental personality reside, we organized two sports/physical sessions every day for the students. The first one was early in the morning (6.30 – 7.30 am) where the students engaged in exercise in the Institute lawns, and the second one the evening where the students actively took part in the sports of their choice (5.30 - 6.30 pm). We had also planned the students to work on small farms prepared on the Institute lawns during the Foundation Program – but, unfortunately due to logistical constraints the plans could not be implemented.

Table 4: List of Activities in the Foundation Program under Physical Activities and Sports

| | Name | Title | Type of Activity |
|----|--------------------------|-------|------------------|
| 1. | Morning Exercise | | Exercises |
| 2. | Evening Sports and Games | | Sports |

Team work and Communication

At IITGN, we aspire to build a culture of cooperation rather than competition. In this regard, we left that it was extremely important to develop activities around the theme of team work. There was also an emphasis on developing the communication skills (oral, written, and body language) of the students. With this intention, we organized a number of workshops for the students to take part in, and improve various dimensions of their personality. These workshops paid individual attention to every single student at the Institute – something that we can achieve because of our small class size of 120 without compromising on the quality of interaction. In addition, there were communication workshops and feedback on the written communication aspects of the students. The complete list of activities in this segment is as listed in Table 5 in the document.

Table 5: List of Activities in the Foundation Program under Team Work & Communication

| | Name | Title | Type of Activity |
|----|----------------------|----------------------------|--------------------|
| 1. | | Movie: Remember The Titans | Movie |
| 2. | Ms. Rashmi Dutta | Interpersonal Skills | Workshop |
| 3. | | Viva-voce for students | Interaction |
| 4. | Prof Suchitra Mathur | Creative Writing | Workshop |
| 5. | | Journal writing | Private and Public |

Student Feedback

Throughout the program we were continuously taking feedback from the students. This feedback served us a useful purpose in not only taking mid-course corrections but also taking important lessons for next and the years beyond. Overall, there were some very encouraging signs from the student feedback – which point towards the fact that the Foundation Program was a worthwhile effort and the energies were well spent. When asked to respond if the Foundation Program was able to make the students think more about social issues and their responsibilities, on a scale of 1-5, the average student response was 3.7. The students also responded (4.4/5) that organizing field trips and visits to places of historical and cultural significance in the city was a welcome introduction to the city, and made them more comfortable and understanding of Ahmedabad.

Interestingly, when asked at the end of the Foundation Program about their career preferences, nearly half the students (48%) responded by saying that their primary motivation was to make the world a better place by their choice of profession. Many students also expressed their desire to be involved in creative and performing arts through their career choices. One of the major motivations of the Foundation Program was to make the students explore other avenues where their passions may lie, and the results from the student feedback clearly indicate a fair degree of success in achieving that. When asked what did the students find best in the Foundation Program, a majority listed the trips and visits to various places of interest. However, about a fifth of the students (19%) also listed that they relished the fact that they got to spend considerable time with their peers and form a strong bond among themselves.

Perhaps, the most important parameter (and the acid test!) upon which we can judge the success of the Foundation Program is how strongly would the students in the Foundation Program this year, refer the Foundation Program to the incoming class in 2012. When asked to respond to this question, on a scale of 1 to 5, the average response of the students was 4.3!

Lessons for us

The five week program was a major exercise by many involved at the Institute. As this was our first attempt at such a program, there were always going to be important lessons for us at the end of the program. There were some points to ponder that we were able to see for ourselves, and some that were highlighted by the students in their feedback. Some of the major points to take into account next year are given below:

1. *Depth and Width:* Perhaps, in our excitement, we tried to do too much with the students, and introduce them to too many ideas in too short a time. This was something that we felt in the middle of the Foundation Program, and also highlighted by the students as their number one source of dissatisfaction with the Foundation Program. For next year, we will have to give a more considered thought to how many topics and ideas to introduce, and how deep to go into each.
2. *Duration of the Program:* There were some concerns among the Institute and the students that five weeks is too long a time. The students were edging to get started with their classes and regular studies in the last week to ten days. Therefore, for effectiveness purposes, we might consider shortening the Program by a week or so.

3. *Time to the students:* The daily routine of the students was scheduled from 6:30am – 10:30pm. The students were working on this schedule six days a week, with Sundays off. It was strongly felt that more time needed to be given to the students to effectively internalize the ideas and thoughts that were being thrown at them.
4. *Continuing the spirit of the Foundation Program:* Perhaps the most challenging job for us is to continue the spirit of the Foundation Program once it is over. A couple of months after the program, the Institute community is lost in its daily routines, and the ideas and adventurous spirit of the Program seems lost, only to be picked up in July 2012 for the next class! We need a structure in place to ensure that the free spirit associated with the Foundation Program is there for more than the five weeks of the program.

Conclusion

The Foundation Program was a major source of excitement around IITGN! The campus was buzzing for the five weeks of the program, and it was a pleasure and privilege to get a chance to meet many wonderful speakers who took time from their schedule to spend time with our students. In our view, the impact of the Foundation Program can only be assessed in the long-term, if our graduates retain the values that the whole program was introduced in to inculcate in them and also the campus community.
