

# Gujarat Technological University

## BRIDGE COURSE

**Duration:** 22<sup>nd</sup> July 2013 to 31<sup>st</sup> August 2013 (6 Weeks)

### **Concept:**

The State of Gujarat has a large number of students entering in engineering disciplines after their 10+2 classes. In spite of their good academic record and having good marks in JEE examination, students have virtually stopped studying after the month of April. Immediately after the admissions the concern areas are homesickness, sudden transition from vernacular to English language, teacher guided rote learning to applications based self learning and intermingling of a large cross section of students from vastly varying backgrounds. Thus the new academic environment and the teaching methodology build pressure in the minds of even the most confident of students, who then have to struggle on many fronts, to adjust to the campus culture, the class rooms and for those away from their homes, fend for themselves beyond college hours too.

As the students are unable to cope with the pace of teaching and the new campus life in general attention to concepts and understanding of the subject are challenged in the very beginning itself. . This affects their performance in first year end semester examination and subsequent exams in the higher semesters too.

### **Objective of Bridge Course:**

The Bridge Course is aimed to act as a buffer for the new entrants, with an objective to provide adequate time for the transition to hardcore engineering courses. Students will be groomed for the foundation subjects of Mathematics, Elements of Engineering, Physics/Chemistry, English, Information and Communication Technology (ICT), Life Skills, State Cadet Corps (SCC), limited to 10+2 level. This gives them a breather, to prepare themselves before courses for first year engineering commence. During this interaction of 6 weeks with the faculty and their classmates, the students will be equipped with the knowledge and the confidence needed to take on bigger challenges as future engineers of this country. .

### **Design of Bridge Course:**

Breaking away from the tradition of teaching in the Lecture-Tutorial-Practical mode, popularly used in engineering education, the Bridge Course is designed with a mixed set of activities during the class. Hence the teacher-student contact is not classified into number of hours for Lecture (Theory) class or Practical (Laboratory) classes. Interactive and Active Learning by Doing have been weaved into the Bridge Course, for the first time. Hence each subject has been allotted only number of contact hours without any distinction of theory and practical.

### **Subjects:**

Sr. No.	Subjects	Hours / Week	Credits
1	Mathematics	4	2
2	Physics/Chemistry	4	2
3	English Language	4	2
4	Life Skills	4	2
5	State Cadet Corps (SCC)	4	2
6	Information and Communication Technology (ICT)	4	2
7	Elements of Engineering (EE)	4	2
<b>Total</b>		<b>28</b>	<b>14</b>

### Concept of Active Learning:

Active learning with the help of other students has been found to create an environment to make student learning very comfortable. Hence it is envisaged that the students entering the engineering courses can be divided in three groups as 'S' Level and 'A' Level and 'O' Level, based on a very simple, walk-in MCQ test, which needs no prior preparation, to be conducted by GTU at the very beginning.

It is important that the concept of Assisted Learning is clearly explained to the fresh entrants during the Orientation, by each institute. It should be stressed that the purpose was not to classify or test any of their abilities, but to identify leaders amongst them. Thus the selected leaders would know their role and the rest of the students would not feel inferior or isolated on day one of their campus life.

- 'S' LEVEL STUDENTS: The first ten percent students on the basis of the result of MCQ test can be put in S level. Such students shall be leaders of each group of six students and coordinate with faculty and students. They will be the facilitators, who will aid and monitor the entire training process along with the faculty.
- 'A' LEVEL STUDENTS: The student are securing above 20 marks in MCQ Examination will be designated 'A' level. Groups of six students will be formed, to perform the designed activities in different subjects.
- 'O' LEVEL STUDENTS: The student are securing below 20 marks in MCQ Examination will be designated 'O' level. Groups of six students will be formed, to perform the designed activities in different subjects.

### Training for Faculties:

Training for faculty members will be conducted from 15th to 17th July 2013 as per following schedule:

- |     |                                            |                 |
|-----|--------------------------------------------|-----------------|
| (1) | North Zone at VGEC, Chandkheda.            | 17th July 2013. |
| (2) | Ahmedabad Zone at LDCE, Ahmedabad.         | 17th July 2013. |
| (3) | Central Zone at Parul Institute, Vadodara. | 15th July 2013. |
| (4) | South Zone at GEC, Surat.                  | 16th July 2013. |
| (5) | Rajkot Zone at VVP Engineering College.    | 15th July 2013. |

### **Evaluation Test:**

Each paper is of 50 MCQs and of 50 Marks.

- Paper 1 19th July, 2013 (11.00 am to 12.00 pm) – Mathematics
- Paper 2 19th July, 2013 (13.00 pm to 14.00 pm) – English Language
- Paper 3 20th July, 2013 (11.00 am to 12.00 pm) – Physics / Chemistry
- Paper 4 20th July, 2013 (13.00 pm to 14.00 pm) – ICT
- Paper 5 20<sup>th</sup> July, 2013 (15.00 pm to 15.30 pm) – Life Skills (30 MCQs)

Solution/Key will be provided to all Institutions. Evaluation will be done by institute and result displayed on 22nd July, 2013. On the basis of this test, groups of six students will be formed, along with an assigned leader to each.

### **Learning Material:**

Learning material will be provided to all colleges in CDs as well as references will be given in activity manual.

### **End Course Exam:**

Gujarat Technological University will conduct end course examination of MCQ test of all subjects.

### **Regular Course of Semester - I**

Semester – I course will commence from 2<sup>nd</sup> September 2013.

### **Note:**

Each student activity should be recorded by video camera.  
The each activity hour is considered equivalent to one theory hour.