A Profile of Kalyani Govt. Engineering College

1. The College

The Kalyani Government Engineering College was set up by the Govt. of West Bengal to create technical manpower keeping in mind the rapid industrial development of the state. The College is funded by the Govt. of West Bengal both in the form of capital cost as well as recurring cost. The College is affiliated to Kalyani University and managed by a Governing Body chaired by the Minister-in-Charge, Dept. of Higher Education, Govt. of West Bengal. The first batch of students was admitted in August 1995. After successful completion students are awarded B. Tech degree in the respective disciplines.

All the courses are approved by A.I.C.T.E.

2. Location

Kalyani is situated in the southern part of West Bengal in the district of Nadia. Located near Kalyani University at a distance of 53 kilometres from Calcutta, the College can be conveniently accessed by rail or road. Trains from Sealdah station connect Kalyani Ghoshpara which is the nearest railway station and is 2 kilometres away from the College. A number of buses including S.B.S.T.C ply from Esplanade/Babughat (Calcutta) to Kalyani Ghoshpara. The College can be reached from Kalyani Ghoshpara by College vehicle or cycle rickshaw.

3. Existing Programs

The following programs are offered at present with intake 60 in each of the programs.

B. Tech in Computer Science and Technology

B. Tech in Electronics and Communication Engineering

B. Tech in Mechanical Engineering

4. Academic Structure

The duration of the academic programs in Bachelor of Technology is 4 years. Each year is divided into two semesters. The first two semesters are common to all disciplines. Mainly departmental subjects are offered in the subsequent semesters. Students are to undergo training work in puja vacation or in summer vacation. The project is offered in the 7th semester and is extended to 8th semester.

5. Admission Procedure

Only Indian citizens are eligible for admission. Applications are entertained from candidates, both male and female, who have passed H.S. (10+2) examination with at least five subjects of which not more than two shall be vernacular subjects in general or vocational stream of the Council of Higher Secondary Education, West Bengal, with English, Physics, Chemistry, Mathematics and vernacular of any other subjects (full marks not less than 100) or any equivalent examination of a recognised Board or University. Each eligible candidate is required to appear at a written test being conducted by the West Bengal Board of Examination for admission to Engineering, Medical and Technological Degree Colleges and only those qualifying in this Joint Entrance Examination and recommended by the Central Selection Committee can seek admission into the College. 22% of seats are reserved for Scheduled Caste and 6% seats are reserved for Scheduled Tribe candidates.

6. College Facilities

6.1 Library : The library, with a collection of 6,000 textbooks and 2,000 reference books and a number of journals and magazines provides a base for enhanced learning.

6.2 Training and Placement Cell : The cell organizes industrial training for a period of 30 days at the end of pre-final year and normally during the summer vacation. Some of the organizations where students go for their training are GAIL, IOCL, HAL, NTPC, BARC, SAIL, Calcutta Telephones, Hindusthan Motors, Haldia Doc Complex, DSP, ASP, DVC, M. N. Dastur, Andrew Yule, CMERI, MECON, ESAB, Indian Airlines etc.

The cell is also guiding and helping the final year students in securing jobs commensurate with their knowledge and achievement by organizing campus interviews and exploring various avenues for their placement.

6.3 Reprographic Section : The reprographic section is equipped with photocopier machine, cyclostyle machine, scanner, computer with printer etc.

6.4 Guest House : A guest house adjacent to the canteen with three furnished A. C. rooms is operating at present.

6.5 Internet : Internet connectivity using VSAT is established and is used by the entire community of the College.

6.6 Others : All the faculty members, officers and staff members can be accessed through telephone connections with the help of an EPBAX system. A well organised canteen is operated within the campus. A general store meant for the students is also run within the academic block of the College. A memorial prize of Rs. 1,000/- in the name of Anweshan Bhowmik is given to a student every year for the best academic performance from the year 1999.

7. Residential Quarters

Twentyfour residential quarters are being built at present in three blocks in the first phase. More blocks will be constructed in the subsequent phases.

8. Hostel Facilities

There are three boys' hostels in the College named New Hall, Vidyasagar Chatrabas and R.B.C. Hall. A girls' hostel and another boys' hostel are also under construction.

9. Department Facilities

9.1 Chemistry : The department has a very good laboratory equipped with major equipment like conductivity meter, spectrophotometer etc.

The department is also planning to create an Instrumentation Laboratory with major equipment like spectrophotometer with recording facility, polarograph with recorder, IR-spectometer, dipole moment measurement apparatus etc.

9.2 Computer Science and Technology : The department can rightfully boast of a state-of-the-art computing facility. The software laboratory is distributed in four rooms including one "server room". There are around 90 Pentiums (200 MHz MMX) and 30 AT-486 machines, one laser printer, three deskjet printers, and a number of dotmatrix printers housed in the software laboratory in addition to the following :

* IBM AS-400 with a number of software and packages like DB2, JAVA etc.
* IBM RS-6000 (AIX) with a number of compilers and packages.
* Sun Ultra Sparc with Solaris 2.5.3, Java workshop and Oracle 7.3.
* P-II with SCO open system.

All the machines are connected through a LAN.

The department has all modern compilers and other software including Visual C++V5.0, Visual BASIC V5.0, Powerbuilder V6.0, Visual FOXPRO, Visual J++ etc.

The department is also setting up a hardware-cum-peripheral laboratory.

9.3 Electronics and Communication Engineering : The department has state-of-the-art communication, fiber-optic and microwave laboratories comprising of the following major equipment.

* Two 3 GHz spectrum analyser.

* One 1040 MHz and two 550 MHz synthesized signal generators.

* Five 100 MHz and two 20 MHz digital storage oscilloscopes. Some of these are with FFT facility.

* Four 16 MHz arbitrary function generators.

* One optical time domain reflectometer with optical unit and one optical loss test set with laser source.

* Five microwave training systems to measure dielectric constant and phase shift and to study (i) radiation pattern and gain of different types of antenna, (ii) couplers and circulators, (iii) microwave Gunn source and (iv) reflex Klystron.

More sophisticated equipment are being procured.

The other laboratories of the department are also well-equipped with the following major equipment.

* Thirtyfive 2-channel 25/30 MHz and five 2-channel 100 MHz oscilloscopes, thirty signal generators, fortyfive bread boards equipped with power supply and digital meters and fifty DMM to carry out experiment in analog and digital circuit and IC laboratories.

* A number of kits consisting of power supplies, digital meters and relevant devices/circuit to carry out experiments on solid state devices, analog and digital circuits and power electronics laboratories.

* Twentyfive 8085 and twentyfive 8086 based microprocessor kits with various accessories to carry out experiments in microprocessor and related laboratories.

* Seven pattern generators, six colour and three B/W TV set fine picture tubes and fifteen TV kits for television laboratory.

* A number of ac bridges, transducers and associated setup for instrumentation and measurement laboratory.

* Four Pentium-II and five Pentium-I machines for multipurpose use.

9.4 Mechanical Engineering : The department has a very strong setup of workshop and laboratories as mentioned below.

Workshop : Fitting shop includes a number of bench drilling machines and other accessories. Carpentry shop includes different types of hand tools, vertical band saw machine, circular saw machine, thickness planer, jointer/surface planing machine, wood turning lathe etc.

Welding shop includes arc welding, flame cutting, brazing equipment, spot welding etc.

Sheet metal shop includes hand shearing machine (lever type), Guillotine shearing machine, fly/ball press machine, bending rolls, sheet bending machine etc.

Forging shop includes forging accessories, forge with blower etc.

Machine shop has the major equipment like turning lathe, shaping machine, CNC lathe, milling machine (Universal), pillar drill, surface grinding machine, slotting machine, pedestal grinder, drill etc.

Moulding shop provides sand moulding and testing facilities.

The existing shops are being augmented with more equipment like high precision lathe, hobbing machine, cutter grinder etc. for machine shop and pneumatic hammer etc. for forging shop which are being procured.

A new building has been constructed for workshop where at present few laboratories are also housed.

Laboratories : Strength of materials laboratory is equipped with the major equipment like Universal testing machine, Rockwell hardness tester, spring testing machine, impact testing machine, cupping testing machine, fatigue testing machine, die penetration test kit etc.

Metrology laboratory has the major equipment like surface roughness tester, tool makers microscope, slip gauge set, different types of micrometers and gauges.

The metallography laboratory is equipped with metallurgical microscope, electrolytic polishing & etching machine, mounting press, ultrasonic flow detector, ultrasonic cleaner, belt and disc grinder/polisher.

Thermodynamics laboratory includes the major equipment like 2-stroke petrol engine test ring, 2-stroke diesel engine test ring, air compressor etc.

Refrigeration and air conditioning laboratory has refrigerator tutor, air conditioning tutor, mechanical heat pump along with other equipment and accessories.

Fluid mechanics laboratory has low speed wind tunnel, flow visualization wind tunnel, hot air anemometer, pitot static tube etc. as some of the major equipment.

Heat transfer laboratory includes all test rigs for conductive, convective and radiative heat transfer along with other equipment.

Tribology laboratory has been proposed with pin-on-disk device, journal bearing, multipurpose friction & wear tester, micro-scale abrasion tester, two roller test machine etc.

Robotics laboratory with different robotics systems incorporated with vision & touch probe facilities etc. Hydraulic machines laboratory with water turbines, centrifugal pump etc., and Thermal power laboratory with boiler, engine for morse test, engine for PV indicator, steam turbine etc. are also planned.

The department has planned to procure more equipment like TIG & MIG, CNC milling machine, wire EDM etc. to improve the existing laboratories and workshops.

9.5 Physics : The department has a very good laboratory with sufficient equipment to conduct the practical classes. A dark room to conduct optical experiments shall be operational in a very near future.