

DTET News

A quarterly newsletter of the Directorate of Technical Education & Training, Govt. of West Bengal

Vol. 2 No. 2

October - December, 2008

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Official website of Directorate launched; please visit www.wbdtet.gov.in



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Director's Message for the New Year

In our own sphere of polytechnic and vocational education, I personally feel that there is an urgent need of generating and sustaining motivation among the employees working in this system under the overall umbrella of the Department of Technical Education & Training, Government of West Bengal. Polytechnic and vocational education systems, in my personal opinion can be the vehicle of growth for our entire state. What all we need to do is to follow the following four steps:

First, identify the disciplines/areas where education and training are to be imparted in tune with the present and future requirements.

Second, we must make the curriculum and the detailed course of study as per this requirement even making, if need be, a radical departure from the conventional and established norms and methods. Encouraging the students to think must constitute an essential ingredient of the syllabus.

Next, we must build up a pool of trained manpower in every sector who shall impart quality education/training to the students with greater emphasis laid on practical understanding of things and hands on experiences of tools, machines and procedures.

In doing all these, a genuinely sincere approach at re-vamping the present system is essential. For that again, a great sense of motivation must pervade all sections of teachers, staff and administration. In fact, motivation is the most important factor. If we all, wherever we are and in whichever capacity we are working, can truly motivate ourselves to rededicate ourselves to our duties and responsibilities, we can work wonders.

In a government system, motivation cannot be imposed or thrust upon from above. The attribute can only be acquired through self-introspection. A few questions like the following should be addressed to one's own self:

Am I really doing justice to my assigned job?

Am I sincerely carrying out my duties and responsibilities on a regular basis?

Do I always keep the interest of the institute and the other larger interests above my own petty self-interest?

Do I take care of all the instruments, articles and things of my institution as I care for my belongings at home?

Do I consciously attempt all the while to be polite and humble and try to get along well with others?

At the end of a day's work, can I satisfactorily answer my conscience that I really tried to do my duties for the day honestly and diligently?

If answer to any of the above questions is NO, even partly, then there is a strong need to motivate ourselves again. Remember, motivation, to a great extent, comes from gratefulness. We should be grateful to the society, and the public at large, that we have got the chance to serve in the government. It is our duty to pay back our debt. This sense of gratitude, once born within you, will motivate you forever.

On this New Year's Day of 2009, let us solemnly take a pledge that we will rededicate ourselves to the cause of our society, our state and our country. Start believing in yourselves that the sincere work rendered by you in your own sphere shall also contribute towards the making of our nation!

Keep yourself motivated! Best wishes for a very happy new year.

For more, please go to www.wbdtet.gov.in

EDITORIAL

On October 22, 2008 India became the 6th country after former USSR, USA, Japan, the European Space Agency (comprising 17 countries) and China to launch a Moon Mission that started first in 1959. The Indian Tricolour painted on all sides of the 29-kg Moon Impact Probe (MIP) which was attached to the top part of the main orbiting spacecraft, Chandrayaan - 1, made its glorious presence near the Shackleton crater on the moon surface at 20:30 IST on November 14, 2008. Indian space scientists and technocrats have once again demonstrated their technological prowess. Delhi-based strategic analyst Bharat Karnad expressed the national sentiment most explicitly while saying, "100 to 150 years from now, when the moon is colonised, India can be proud that it had a pioneering status."

In a different remove, our country, while making rapid technological strides, is falling behind in generating enough skilled workforce to turn the turbines of her economic growth. Vocational education targeting self-employability through start-up businesses should be the focus area of our education system. The National Skill Mission including a Sub Mission on Polytechnics, launched by the Prime Minister recently, could not have come at a more opportune time. The Mission holds out many opportunities for our system. It is the duty of us all to catch these flood-tides of opportunities and sail smoothly in the 21st century taking our hapless, poor brethren along with us.

"Resource may be limited but creativity is unlimited."

NATIONAL SEMINAR ON 'DEVELOPMENT AND HUMAN RESOURCE GENERATION IN FOOTWEAR & LEATHER GOODS INDUSTRY'



Sri Puresh Rajda, Chairman, Council for Leather Export (CLE), ER



Sri Chakravarthi Mulkap, Hon'ble M-I-C, Dept. of T.E.&T, Govt. of W.B. inaugurated the Seminar



Sri Anup Chatterjee, Ex-Chairman, CLE, ER



Sri S.S.Kumar, Ex-Chairman, CLE, ER

National Seminar On 'Development and Human Resource Generation in Footwear & Leather Goods Industry' was ably organised by Central Footwear Training Centre, Budge Budge under the guidance of Directorate of T.E.&T. at the premises of the institute during 12-13 Dec, 2008. The seminar was graced by the presence of bigwigs of the leather industry representing organizations like CLE, CLCTA, ILPA, IFCOMA, ILTA, CFTI, CLRI, MSME etc. The participants enjoyed the seminar, actively participated in discussions and exchanged their views in a frank manner.



Sri Tapan Nandi, Indian Leather Product Association



Sri Sunmath Ganguly, Director, Central Footwear Training Institute, Agra



Sri B.D.Bhaiya, M.D., Components & Equipment, Kolkata



Smt. A. Anudesvari, Scientist, Central Leather Research Institute



Hon'ble M-I-C releasing the souvenir



Sri A.B. Mondal, Director, Central Leather Research Institute

"If you would not be forgotten as soon as you are dead and rotten, either write things worth reading, or do things worth the writing." - Benjamin Franklin

22ND INDUSTRIAL INDIA TRADE FAIR- PARTICIPATION OF T.E. & T. DEPARTMENT



The directorate was given the responsibility of hosting the pavilion of the Department of Technical Education and Training, Govt. of West Bengal in the 22nd Industrial India Trade Fair held in Kolkata from 23rd December, 2008 to 2nd January, 2009. Officers from the directorate along with personnel from polytechnics made it a successful venture with their wholehearted efforts. Visitors from industries, academia and others praised the presentation, exhibition and the information providing services of the department.



Introduction to Mechatronics

Soumitra Bandyopadhyay
Kanyapur Polytechnic, Asansol

'Mechatronics' is derived from 'Mechanics' + 'Electronics.' The term was coined in Japan in the 1970s. Mechatronics is a design domain which emerged in response to an urgent need to integrate these two engineering disciplines in the design of products that could not be designed by the traditional single discipline approach.

According to the Mechatronics Forum (UK) an apt definition of the discipline is "Mechatronics is the synergistic integration of mechanical engineering with electronics and intelligent control algorithms in the design and manufacture of products and processes." It is an effective linking of Mechanical, Electrical and Computing systems to make an optimum product. It was closely connected with the development of NC machines in the beginning. Later it became very popular in connection with development of robots. Now of course it is applied to any intricately controlled product like printers, cameras, electronically controlled engines etc.

In the field of mechatronics, the technology has evolved through several stages that are primarily defined in terms of Primary, Secondary, Tertiary and Quaternary level Mechatronics. The primary level encompasses input/output (I/O) devices such as sensors and actuators that integrate electrical signalling with mechanical action at the basic control level. Secondary level mechatronics integrates microelectronics into electrical control devices. The tertiary level further enhances the quality in terms of sophistication by incorporating advanced feedback functions into the control strategy such as microprocessors, Application-Specific Integrated Circuits (ASIC) etc. as bits and pieces of control realization. The mechatronic systems at this level are called smart systems. The quaternary level attempts to improve smartness by a step by introducing intelligence and FDI (Fault Detection and Isolation) capability into the systems. Artificial Neural Network (ANN) and Fuzzy Logic try to capture some of the intellectual capabilities of the intelligent human beings.

The scope of mechatronics is vast and is chiefly in the domain of manufacturing & design.

Key Words: Mechatronics, sensor, actuator, robot, microprocessor, ASIC, FDI & ANN.

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Profile of legendary scientist : Acharya Jagadish Chandra Bose



Speaking on a great Indian scientist whose life period spanned both nineteenth and twentieth century, Sir Neville Mott, Nobel Laureate in 1977 for his contribution to solid-state electronics, had once remarked that he "was at least 60 years ahead of his time". He was speaking of a scientist extraordinaire - our very own Acharya Jagadish Chandra Bose.

This prescient scientist gave his first public demonstration of electromagnetic waves using them to ring a bell remotely and explode some gunpowder in 1895. The Daily Chronicle of England wrote, "The inventor has transmitted signals to a distance of nearly a mile and herein lies the first and obvious and exceedingly valuable application of this new theoretical marvel."

Jagadish Chandra Bose's field of work and interest were greatly diverse, from electromagnetic waves to semiconductors and to animal and plant psychology. He had conceived the existence of p-type and n-type semiconductors which ushered in the meteoric development of modern-day electronics. In 1954, Pearson and Brattain acknowledged Bose's contribution in the use of a prototype semiconductor crystal (galena) as a detector of radio waves. During the years 1894 - 1900, Bose performed pioneering research on radio waves and created waves as short as 5 mm and demonstrated remote wireless signaling. Regrettably, he was denied the credit of his invention.

In 1901, Bose's research paper titled 'Response in the living and non-living' with live demonstration of fatigue developed in the metals as a result of repeated use, took the scientific fraternity of Europe by storm which refused to accept the truth and even disallowed publication of the article in the prestigious journal of the Royal Society of London. Paradoxically, Bose was the first Indian scientist, a few years later, to be elected to the Society in 1920. Even more interesting is the fact that it was his innovative application of the basic laws of Physics to establish existence of 'life' in 'non-living objects' which laid the foundation of studies in a then-unknown field -- Bio-Physics.

Crescograph was another pathbreaking invention by Bose designed to study plant growth. It could magnify small movements of plants by as much as a million times and perceptibly displayed the response of plants to external stimuli.

Jagadish Chandra was born on 30th November, 1858 in the village of Radikhal in the district of Dhaka (now in Bangladesh) in a well-to-do family with high moral values. His father, Bhagaban Chandra Bose, was a Deputy Magistrate in Faridpur district. He was educated at St. Xavier's College, Calcutta and then at Christ's College, Cambridge with a scholarship to study Natural Science. Returning to India, Bose joined Presidency College of Calcutta in 1885 as Professor of Physical Science. He retired from service in 1915 and was appointed Emeritus Professor in the Physics department of the University of Calcutta for a period of 5 years. In 1917, he founded the Bose Research Institute in Calcutta which still is one of the pioneering scientific research institutes in India.

A close friend of Kabiguru Rabindranath Tagore, Jagadish Bose breathed his last on 23rd November 1937. The 1945 edition of the Encyclopaedia Britannica paid homage to this nonpareil thinker of his time by saying, "Prof. J.C. Bose was so much advanced of his time that a precise evaluation of him was not possible."

CORNERING GLORY

Mr. Pushpal Bhaumik, an ex-student of B.P.C. Institute of Technology, Krishnanagar has contributed an amount of Rs. 3,000,00/- (Rupees Three lakhs) to the Students' Aid Fund of the institute. This fund, controlled by the Re-union Committee, is utilized to provide financial support to the poor but meritorious students of the institute every year.

Details of Mr. Bhaumik is given below:

Name- Mr. Pushpal Bhaumik

Year of Passing from B.P.C.I.T.- 1968

Branch- Electrical Engineering

He is presently working in Metro Railway, New York, USA as Electrical Engineer.

Lot of thanks, Mr. Bhaumik!!!

Mr. Dibyendu Bikash Bhattacharya, Lecturer in Architecture of Women's Polytechnic, Chandernagore has been awarded Gold Medal by Bengal Engineering & Science University, Shibpur for scoring the highest marks in the Master of Town & Regional Planning Examination in the year 2008. Mr. Bhattacharya is also the recipient of the best thesis award of the Institute of Town Planners, India.

Congrats, Mr. Bhattacharya!!!

POLYTECHNIC NEWS

Bengal Institute of Technology, Katwa started repairing power transformers from the district of Burdwan and surroundings since the Community Polytechnic Cell began functioning in the institute. As a result, revenue was generated and used for over all development of the institute. In addition to revenue generation, the shop has been very useful in respect of practical training of students in the transformer range of 10KVA to 500 KVA. The shop also has a machine for filtering the transformer oil. All repairing works are supervised by faculty members of the institute.

Published by : Directorate of Technical Education & Training, Govt. of West Bengal
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