THE HISTORY BOOK

Harcourt Butler Technical University

(Erstwhile Harcourt Butler Technological Institute)

(A journey of hundred years, since 25 November, 1921)

25th November, 2021

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Dedicated to all stakeholders

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ACKNOWLEDGEMENTS

Not many get the opportunity of witnessing an occasion as momentous as the centenary celebration of an institution. The excitement, enthusiasm and euphoria are seen clearly in the eyes of all those who are associated with the university. Harcourt Butler Technical University (HBTU) has contributed significantly in the development of the state and the nation. A journey of hundred glorious years without compromising the integrity, by the institution is commendable. The Editors of this History Book feel privileged for having got a chance to prepare this document, The History Book. All stakeholders have significantly contributed in the growth and development of this legendary institution.

The journey of hundred years is going to be completed on 25th November 2021. State and Central Governments are acknowledged for their continual support and encouragement in the making of this University. The History Book will be released by Hon'ble President of India, Mr. Ram Nath Kovind, on 25th November, 2021 during his visit to thisUniversity. Year 2021 is being celebrated as the Centenary Year by the institution, and various academic activities are being organised to commemorate it. Many landmark structures have been created as a souvenir of this event. All those people are being acknowledged, who have directly or indirectly contributed in the making of this gem, “The History Book”. Though due diligence has been exercised in the editing of the book, however for mistakes and omissions, the editors be forgiven due to obvious reasons. The data and information as contained in this book, is as received from the various units, sections departments, schools and the people associated with this University.

From the core of our heart, we wish to acknowledge wholeheartedly the guidance and motivation provided by Hon'ble Vice Chancellor, Prof. Samsher.

Prof. Neeraj Kumar Singh, Registrar and Mr. Ajay Jauhari, Finance Controller, deserve special acknowledgement for their allout help and support provided at all times.

We sincerely acknowledge the untiring hard work and valuable contribution of Shri Sanjay Mishra & Shri Neel Kamal both staff officers of the Vice Chancellor's Secretariat in collection of historical data. Shri Gyan Singh and Shri Rohit Srivastava for relentless efforts in design and phototypesetting to bring this book in its present form.

The overall contribution of staff members, faculty members,

section incharges and all Deans/Heads of departments of the University is sincerely acknowledged.

The team of present students and past students (Alumni), their parents and all stakeholders deserve special mention for their contribution in preparing this history book.

In the end, we wish to sincerely thank one and all contributed for the preparation of this book directly or indirectly.

- Editors

25th November, 2021

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PREFACE

"History is not a burden on the memory but an illumination of the soul" ***– John Dalberg-Acton***

History never looks like history when you are living through it. The History Book contains the contents as contributed by all the schools and the department of the University, which have been curated here in the book, and tried to presented before the reader in the best possible manner. It contains the details of various milestones and prominent events associated with this institution. Veracity of data and information as presented in the book has been established to the best possible extent. The book is dedicated to all the stakeholders of the institution. Compilation of data and information, and editing had been an exciting experience, replete with emotions for the Guides and the Editors.

"History is the version of past events that people have decided to agree upon" ***- Napoleon Bonaparte***

Vigorous and determined endeavours of Guides and Editors, who have worked their fingers to the bone to make this book, will be clearly perceived by the readers, and also, appreciated by them. It is being hoped that readers will take pride while going through this book, and will be filled with a sense of accomplishment. This book is not only a memoir and a souvenir of the distinguished and glorious past, a beautiful present, but also, a harbinger ofa golden and promising future of this great institution.

- Editors

25th November, 2021

PROLOGUE

"As I pen these words to leave a lasting record, I wonder myself where it all began" ***- Richard Peck***

The thing about books is that they let you travel without moving your feet. This book will not only take you on a different journey, but also to a different time zone; starting from the beginning in relation to this institution. This book is a chronicle of the journey of this legendary institution from erstwhile Government Research Institute, Cawnpore in year 1921 to Harcourt Butler Technical University, Kanpur in year 2016, and today in year 2021.

From its inception in 1920, when the Government of United Provinces established this institute, as the first stone of foundation, to the current building, which was being initiated by Sir Spencer Harcourt Butler, the then Governor of United Provinces of erstwhile British India, this journey of this institution had been just incredible, and emblematic of the progress of this great nation over a century. The core belief and the spirit on which this institution was created, was to produce skilled manpower and professionals. The institution is spread across two campuses, viz. East Campus (74.84 acres) and West Campus (248.64acres). East Campus houses administrative and instructional buildings.

The path to success hasn't been a straight and simple for this institution from six students enrolled with the first convocation in 1962, to it being the acclaimed university today. Many notable alumni later went on to spread their wings, and have reached new heights. The institution is credited with innumerable inventions and innovations, and adorned with manifold achievements and accolades. This institution has walked through the various stages of expansion over the hundred years, and has witnessed several shifts in its culture.

कुलगीत

वरदे वीणा पाणि शारदे।।
अखंड कीर्ती लाभ प्राप्त हो।
विश्वविद्यालय पर कृपा दृष्टि हो।
विश्व मान्यता नित बरसे।।

काव्यशास्त्र, साहित्य विधा नव।
उदीयमान कौशल विकास।।
शोध, बोध नवविचार उन्नत।
विद्या मंदिर नित हुलसे।।

अभियांत्रिकी, प्रौद्योगिकी अरू।
मानविकी सामाजिक ज्ञान।।
भविष्य उज्जवल बनकर दिनकर।
छात्र तेज नित-नित विलसे।।

Sir Spencer Harcourt Butler

आनंदीबेन पटेल
राज्यपाल, उत्तर प्रदेश

राज भवन
लखनऊ - 226 027

शुभ सन्देश

मुझे यह जानकर अत्यन्त प्रसन्नता हुई कि हरकोर्ट बटलर प्राविधिक विश्वविद्यालय, कानपुर द्वारा 25 नवम्बर, 2021 को शताब्दी वर्ष का आयोजन किया जा रहा है। इस अवसर पर 'इतिहास पुस्तिका' का प्रकाशन भी किया जा रहा है।

किसी भी संस्था के लिये 100 वर्ष पूर्ण करना गर्व और आत्मावलोकन का अवसर होता है। मुझे हर्ष है कि विश्वविद्यालय ने शिक्षा के क्षेत्र में अपनी जिम्मेदारियों का सफलतापूर्वक निर्वहन करते हुए अपनी स्थापना के सौ वर्ष पूर्ण कर लिये हैं। मुझे पूर्ण विश्वास है कि विश्वविद्यालय अपनी उत्कृष्टता को भविष्य में भी बनाये रखेगा।

'इतिहास पुस्तिका' के सफल प्रकाशन हेतु मैं अपनी हार्दिक शुभकामनाएं प्रेषित करती हूँ।

આનંદીબેન

(आनंदीबेन पटेल)

जितिन प्रसाद
मंत्री प्राविधिक शिक्षा विभाग

सं. 016/वी.आई.पी./मंत्री प्रा.शि.
60-61, मुख्य भवन,
सचिवालय, लखनऊ

शुभ सन्देश

मुझे यह जानकर असीम प्रसन्नता की अनुभूति हो रही है कि उत्तर प्रदेश की औद्योगिक नगरी कानपुर में स्थापित हरकोर्ट बटलर प्राविधिक विश्वविद्यालय (पूर्ववर्ती एच.बी.टी.आई.) अपनी स्थापना के 100 वर्ष में कदम रखकर दिनंक 25 नवम्बर, 2021 से शताब्दी वर्ष समारोह का आयोजन कर रहा है और इस अवसर पर एक 'इतिहास पुस्तिकज्ञ' का भी प्रकाशन करने जा रहा है।

यह विश्वविद्यालय उत्तर भारत के पुरातन शैक्षिक संस्थाओं में एक अग्रणी शैक्षिक संस्था है जिसका अपना गौरवशाली इतिहास रहा है। इस विश्वविद्यालय का योगदान इस दृष्टि से भी अतुलनीय है कि संस्था में शिक्षा प्राप्त करने वाले विद्यार्थीगण अपने ज्ञान के प्रकाश से भारत ही नहीं अपितु पूरे विश्व को आलोकित कर रहे हैं।

हरकोर्ट बटलर प्राविधिक विश्वविद्यालय, कानपुर द्वारा शताब्दी वर्ष समारोह के सफल आयोजन एवं 'इतिहास पुस्तिका' के प्रकाशन हेतु मैं अपनी हार्दिक शुभकामनाएं देता हूँ।

(जितिन प्रसाद)

संदीप सिंह
राज्य मंत्री
(वित्त, चिकित्सा, शिक्षा एवं प्राविधिक शिक्षा)

जी 2/3 बापू भवन,
लखनऊ

शुभ सन्देश

अत्यन्त हर्ष का विषय है कि उत्तर प्रदेश हरकोर्ट बटलर प्राविधिक विश्वविद्यालय, कानपुर द्वारा दिनांक 25 नवम्बर, 2021 को अपनी स्थापना के 100 वर्ष पूर्ण कर शताब्दी वर्ष समारोह का आयोजन किया जा रहा है। तकनीकी शिक्षा के क्षेत्र में उत्तर प्रदेश हरकोर्ट बटलर प्राविधिक विश्वविद्यालय का अपना एक विशिष्ट स्थान है।

मुझे विश्वास है कि यह विश्वविद्यालय भविष्य में भी गुणवत्तापरक शिक्षा प्रदान करता रहेगा और प्रदेश एवं देश को गौरवान्वित करेगा।

शताब्दी वर्ष समारोह के सफल आयोजन एवं इस अवसर पर प्रकाशित होने वाली 'इतिहास पुस्तिका' के सफल प्रकाशन हेतु मेरी शुभकामनाएं।

(संदीप सिंह)

प्रो. धीरेन्द्र पाल सिंह
अध्यक्ष

विश्वविद्यालय
अनुदान आयोग
शिक्षा मंत्रालय, भारत सरकार

शुभ सन्देश

मुझे यह जानकर अति प्रसन्नता हो रही है कि हरकोर्ट बटलर प्राविधिक विश्वविद्यालय, कानपुर ने अपनी स्थापना के 100 वर्ष पूर्ण कर लिए है। इस उपलक्ष्य में विश्वविद्यालय दिनांक 25 नवम्बर, 2021 को शताब्दी वर्ष समारोह का अयोजन करने जा रहा है। शताब्दी वर्ष उत्सव का आयोजन करना किसी भी संस्था के लिए गौरव की बात होती है। इस अवसर पर विश्वविद्यालय द्वारा 'इतिहास पुस्तिका' का प्रकाशन भी किया जा रहा है जिसमें विश्वविद्यालय के अतीत, वर्तमान व भविष्य पर प्रकाश डालने हेतु विभिन्न आलेखों, ऐतिहासिक चिन्हों, महत्वपूर्ण पत्रों व अभिलेखों का संकलन किया जायेगा।

मैं इस पुनीत अवसर पर विश्वविद्यालय के कुलपति प्रो. समशेर, कार्य परिषद् एवं विद्धत परिषद् के सदस्यों, कुलसचिव, प्रशासनिक अधिकारियों, शिक्षकों एवं वर्तमान तथा पूर्व विद्यार्थियों और संस्था से जुड़े सभी सदस्यों को अपनी शुभकामनाएं देता हूँ जिन्होंने इस विश्वविद्यालय के शैक्षणिक विकास में अपना योगदान दिया है। मुझे विश्वास है कि हरकोर्ट बटलर प्राविधिक विश्वविद्यालय भविष्य में भी अपनी उत्कृष्टता को बनाये रखेगा।

शताब्दी वर्ष समारोह के सफल आयोजन एवं 'इतिहास पुस्तिका' के प्रकाशन हेतु मेरी हार्दिक शुभकामनाएं।

(आनंदीबेन पटेल)

प्रो. अनिल डी. सहस्रबुद्धे
अध्यक्ष

अखिल भारतीय
तकनीकी शिक्षा परिषद्

शुभ सन्देश

मुझे यह जानकर अति प्रसन्नता हो रही है कि हरकोर्ट बटलर प्राविधिक विश्वविद्यालय, कानपुर ने अपनी स्थापना के 100 वर्ष पूर्ण कर लिए है। इस उपलक्ष्य में विश्वविद्यालय दिनांक 25 नवम्बर, 2021 को शताब्दी वर्ष समारोह का अयोजन करने जा रहा है। शताब्दी वर्ष उत्सव का आयोजन करना किसी भी संस्था के लिए गौरव की बात होती है। इस अवसर पर विश्वविद्यालय द्वारा 'इतिहास पुस्तिका' का प्रकाशन भी किया जा रहा है जिसमें विश्वविद्यालय के अतीत, वर्तमान व भविष्य पर प्रकाश डालने हेतु विभिन्न आलेखों, ऐतिहासिक चिन्हों, महत्वपूर्ण पत्रों व अभिलेखों का संकलन किया जायेगा।

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शताब्दी वर्ष समारोह के सफल आयोजन एवं 'इतिहास पुस्तिका' के प्रकाशन हेतु मेरी हार्दिक शुभकामनाएं।

मुझे विश्वास है कि हरकोर्ट बटलर प्राविधिक विश्वविद्यालय भविष्य में भी अपनी उत्कृष्टता को बनाये रखेगा।

अनिल सहस्रबुद्धे

(अनिल डी. सहस्रबुद्धे)

1
THE GENESIS

Sir Spencer Harcourt Butler was one of the most reputed and honoured officers of the Indian Civil Services. He was a learned Englishman who worked for the development of the region wherever he got appointed. The establishment of the Government Research Institute, Cawnpore (Kanpur) was his eminent effort and determination. Later on, the Institute was renamed after his name to Harcourt Butler Technological Institute, in his honour. Sir Spencer Harcourt Butler was born on August 01,1869 in Middlesex, England. His schooling was completed from Harrow School and further studies from Balliol College, Oxford. He was appointed as the Governor of United Provinces from January 3, 1921 and he served at this post till 21 December, 1922. He was followed by Sir William Sinclair Marris. Sir Butler later on appointed as the Governor of Burma from January 2, 1923 to December 1927. He had already served as the Lieutenant-Governor of Burma from October 28, 1915 to September 22, 1917. The Government of India, in the year 1910, appointed Sir Butler as the first Member for Education with a seat on the Viceroy's Executive Council. He also served as the first president of the Delhi Gymkhana, which was founded in 1923. He had also served as Lieutenant Governor of the United Provinces of Agra and Oudh from the year 1918 to 1921.Sir Harcourt Butler was appointed as a Companion of the order of the Star of India (CSI) in 1909, knighted as a Knight Commander (KCSI) of the same order in 1911. He was promoted to Knight Grand Commander (GCSI) of the order in 1928. He was appointed a Companion of the order of the Indian Empire (CIE) of the same order in 1923.Sir Harcourt Butler was married with Amelia Katherine Florence Wright. His brothers were Montagu Sherard Dawes Butler and Geoffrey G. Butler. He died at an age of 68 on March 02, 1938 in London. He achieved many honours in his life span and soared through the sky very high.

1.1 Background

Sir Spencer Harcourt Butler was among the first of the people, who realized the importance of the application of science to industry and life, and regarded it as the greatest need of that time and condition. Cawnpore (now Kanpur) was a prime location, and was considered as a great Industrial Centre. It was quite rich in the capacity and resources required. Kanpur being an industrial area, lacked any such institute that could induce research work or tender some technical education for the further development of the industries. A significance step was required to make the teaching closely linked with industry and production in order to enlighten new students and

those, who were already working in the industry. An institute, with unique multi-dimensional character, was required which would continue to receive strong support from theGovernment, the people, the industrialists and the academic world, so that it could continue to participate in an ever-increasing manner in the service of the nation.

1.1.1 How it all started

Fourteen years before the actual inking and then foundation of the Institute, in the year 1907, Sir Spencer Harcourt Butler prepared a brief note which he presented at Sir John Hewett's Industrial Conference. The conference was held to encourage and expand Industrial activities and growth in India. The proposal was received with great enthusiasm but was consigned in due course, of slow processes of unconcern. Later on, in the same year, the proposal was reviewed in Nainital at the Industrial Conference. The conference resulted in the proposal of two Institutes, one at Roorkee for Engineering and the other one at Cawnpore (Kanpur) for Chemistry. The obstructions that were caused from the higher authorities resulted in the further delay. Furthermore, on the recommendation of Holland Commission (1916-18), a three year post-graduate diploma course in Chemical Research and in Oils were confirmed.

1.1.2 The Nainital Meeting

Harcourt Butler Technological Institute, Kanpur Society was registered under Societies Registration Act, 1860 (Act No. XXI of 1860) which was implemented with the purpose of augmenting the legal stipulations of society registration for the advancement of Literature, Fine Arts, Science or Distribution of awareness for bountiful purposes. The Indian Industrial Commission, proposed to establish two institutions in its Nainital meeting in 1907, one at Roorkee for Engineering and the other at Kanpur for Chemistry. In the same year, the office of Industrial Chemist to Government of U.P. was established at Kanpur and Shri J.P. Srivastava was appointed as its first Industrial Chemist. In 1921, after a lot of controversy in the U.P. Assembly during the Industrial Ministership of Shri C.Y. Chintamani who strongly backed the opening of such an Institute, and it was decieded to commence teaching as well. In the very same year, the Government Research Institute was renamed as Government Technological Institute, United Provinces, Cawnpore that marked as a shift from an industrial institute to an educational one.

1.2The Foundation Day

Sir Spencer Harcourt Butler delivered the following address on 25th November, 1921: the day the Institute's foundation stone was laid.

Mr. Mehta and Gentlemen,

Fourteen years ago, in a note which I prepared for Sir John Hewett's Industrial Conference, I proposed the foundation of a Technological Institute for Cawnpore. The proposal was received, with, some enthusiasm and was consigned, in due course, to the slow processes of unconcern. The great Frenchman, whom Austin Called the godlike Turgot, once observed that it was not error that opposed the progress of truth so much as indolence, indifference, the spirit of routine, all that favoured inaction. The obstructions that, on this high authority, oppose the progress of truth have delayed the ceremony of today. I cannot but remember and regret the years that have been lost. I can but hope that the future may witness greater interest, a larger boldness in our industrial policy, a determination to scrape off the mental moss, so luxuriant in this climate that chokes experiment and innovation.

The application of science to industry and life is perhaps the greatest need of our time and our condition. "If in the last hundred years", said Mr. Balfour speaking of the West, "the whole material setting of civilized life has altered, we owe it neither to politicians nor to political institutions. We owe it to the combined efforts of those who have advanced science and those who have applied", and again "science is the great instrument of social change, all the greater because its object is not change but knowledge and its silent appropriation of this dominant function, amid, the din of political and religious strife, is the most vital of all the revolutions which have marked the development of modern civilization." This Institute may thus be said to mark an ultimate sociological as well as an immediate industrial idea.

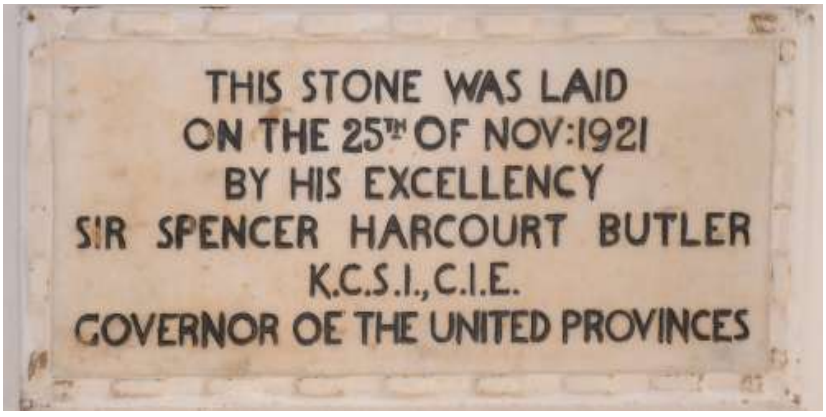
The Institute will have two sides, instruction and research. They must operate and energize together. That is now the accepted view. In my convocation speech to the Allahabad University on the 20th November 1920, I set out at some length the claims of research, quoting the almost infallible authority of Sir J. J. Thompson in favour of efficient laboratories and leisure for the professors. Apart from chemical research we hope to train here and send out young men able to help existing industries in the province and found new ones. If we are late in entering the industrial field we have vast resources of raw material, the openings for which still largely unknown. A start will be made with vegetable oils, leather and tinctorial chemistry. Under vegetable oils there are possibilities in connection with paints varnishes, soaps, vegetable butter, etc. Under leather may be grouped research into tanning agents, the extraction of tanning, the manufacture and purification of tallow and the making of glue. Tinctorial chemistry will cover dyeing, bleaching, mercerization and finishing of cloth. As the institution grows it is hoped to turn attention to the chemistry of glass, the

manufacture of alkalis, cement and starch. We must not expect to avoid mistakes or be impatient of results. The Work of the Institute will take time. The professors must be given a reasonably free hand. But they must not lose touch with the world of the business and the practical Conditions of industry. For this purpose my Government and I (and my honourable colleague Mr. Chintamani is deeply interested in the success of this Institute) contemplate the appointment of an advisory committee on which the Chambers of Commerce, the Board of Industries, the Universities and the Legislative Council will be represented. They have helped us hitherto; we are grateful for it; and we rely on their assistance in the future.

We must not stand still. Let our motto be 'on and ever on'. The outlook is favourable. The site of the new institution is within easy reach of the great industrial centre of Cawnpore, rich with Capacity and Experience. Is it too much to hope that there may grow up round this Institute and the Agriculture College next door a University worthy of what I have called the industrial capital of the province; that Cawnpore will follow the example of Leeds and Manchester and other great commercial centres of the West? I will set no limits in my imagination to the future progress of Cawnpore or the United Provinces. I will not admit one argument against their destiny. I count on the generosity of her citizens in season. In hope and aspiration, which dare aver to be well-founded, I shall now gladly declare the foundation-stone of the Cawnpore Technological Institute to be well and truly laid."

1.3 The First Batch

In 1921, it was decided to admit three students for training in Applied Chemical Research along with 3 students in Oil Technology and



The great Foundation Stone

Main Building of Harcourt Butler Technological Institute, inaugurated in 1921 and extended at various stages. The lower storey houses the administrative offices and the laboratories, while the upper storey houses a spacious Library and the class - rooms.

Chemistry. Thus, this renowned Institute had an initial phase of beginning with 6 students. But the first ever batch of students asked for training in Mechanical Engineering was for about 6 months. The primary reason behind sending the students to Government Technical School, Lucknow, as told by Sri H.S. Chaturvedi, was the fact that though the students were admitted to the Institute but no buildings and laboratories were ready for teaching purpose.

1.4The Infrastructural Plan

Two old buildings of Government Soda Factory (at present the residences, near Department of Electrical Engineering, and earlier the Office of Assistant Engineer, Construction) were converted to laboratory and the lecture rooms. Also, the construction of the buildings of BungalowNo. 1, 2 & 3 in Laxman Bagh was started. In the year 1922, the Bungalows in Laxman Bagh were completed. Applied Research Section and Oils Technology & Chemistry were started in Bungalow no. 1and no. 3 respectively. Bungalow No. 2 was used as Workshop with a Pilot Plant for Chemical Engineering. The earlier name, Government Technological Institute (earlier name of Harcourt Butler Technological Institute), United Provinces (earlier name of Uttar Pradesh), Cawnpore (earlier name of Kanpur), thus started in Bungalow No. 1, 2 and 3, Laxman Bagh, up to the year

1925.

With the advancement in the technological field, there was a revolutionary conversion in the industrial patterns of the state. There had existed 73 large scale units in the state in 1951, primarily consisting of traditional industries of sugar, textile and oil etc.,But in the planning era, up to1971-72 (January 1972), 404 licenses, involving an investment of Rs. 46,056.55 lakhs, were granted. The outcome of these licenses was fabrication of the industrial structure of the state, which was too diversified in contrast to the old traditional one, as various major industries came in the field such as fertilizer, rayon yarn, Nylon, Yarn, Textile, Machinery parts, Synthetic rubber, Television sets, Caustic soda, Liquid chlorine, steel casting and alloy wire, Galvanized steel pipes and tubes, Transformers and other electronic goods, etc.

Besides the creation and the launch of numerous central public sector projects, new employment opportunities were generated, and new opportunities for establishing small scale ancillary units were also initiated. The establishment of technologically competent small scale ancillary industries were being recognized as the most appropriate measures to provide quick employment to technical and non-technical manpower. Various measures were also taken to promote the ventures and all possible needed facilities, which eventually lead to exponential industrial development and the progress. During and after the Third Plan period, the Government of India had allotted various central public projects to the state.

In 1961, an “Applied Industrial Research Scheme” was introduced in the Institute, but it was only after 1962, the Institute could create a clear thought and vision about it. Keeping the scheme in background, a sound educational policy was framed, which was the philosophy of growth, during the years 1962-69, the Institute could create major breakthroughs, breaking all barriers and the limitations, and had burst forth with a new vig our of life. That time, this prestigious institution was perceived by the public as a college of imparting education on Oils Technology and a few other subjects. This image was cherished for a long time. During 1962-69, this institute was transformed into an institution of learning in the domains

of engineering and technology. A plan for education in other fields was also formulated, while keeping research in the core of whole teaching-learning process..

1.5 Beginning of the Institute

After the proposal was approved, and the green flag was shown, for the beginning of the Institute in the Nainital Industrial Conference (1907), on 25th November 1921, Sir Harcourt Butler laid the Foundation-stone of the Institute.

The Institute started in two rooms of the Sherwali Kothi (Bhootwali Kothi), Nawabganj, Cawnpore (Kanpur). The old majestic building can still be seen on the North-West corner of the Company Bagh crossing, Nawabganj, Kanpur adjacent to the Opium Research Laboratory. The Institute had started as a Research institute with its Principal Dr. E. R. Watson, and his two assistants. The Institute was started in this region, while keeping in view all industrial locations, which were then identified by the State Government Industrial Corporation. The Corporation had identified several industrial areas around Bareilly, Lucknow, Haridwar, Kanpur, and Allahabad.

Later, the Institute was allowed to impart technical education in addition to the research work. A large piece of land was allotted by the government in the vicinity of this old majestic building, and it was planned that Institute would have a fully independent campus, with composite labs, lecture rooms, workshops, hostels, playgrounds, staff quarters, hospital and other needed facilities.

1.6 Glory of the Oil Technology Department

In the year 1921, it was decided that Oil Technology course be started along with courses in Leather and Tinctorial Chemistry. In the beginning, two three-year diploma (post graduate) courses were started viz. Chemical Research and Oil Chemistry and Technology, for B.Sc. students. In the first year, the courses had common contents with common classes, while second and third years were totally dedicated to the respective specializations. Students of Oil Technology were sent for practical training in Local Oil mills, Cooper Allen Mills, for Applied Research. Also, the students were given training in various workshops.

In 1932, Sri D. Y. Athawale was appointed in Oil Department,

and Sri J. A. H. Duke was appointed as Head of Oil Department.

In 1937, Sri D.Y. Athawale took over as the Acting Principal. In the same year, Central Control Laboratory of Government of India was housed in HBTI. It was kept under the charge of Oils Technology Department. This laboratory was later shifted to Aligarh. In 1942, the Office of Glass Technology of Government of Uttar Pradesh was created in HBTI. This office continued to be here for a very long time. During the Second World War, many schemes of industrial importance like Blown Rape Oil and Mustard Oil were brought to the institute.

In 1947, a new scheme of improving the quality of Sunn Hemp Fibre was started. In 1947, Dr. D. R. Dhingra took over as Acting Principal. Research and Development schemes related to the Food, Vegetable, Fibre, Essential Oils, Plastics, Soda ash from Reh and Kuchha Pucca House had started in the same year. However, by the year 1952, all these schemes were terminated or amalgamated. Only Essential Oils Scheme was spared from amalgamation. A short term course on essential oil had also started at this time.

In 1954, a regular Chemical Engineering course was started. It was first such a course in Uttar Pradesh. In 1956, separate teaching positions were also created for Oils and Chemical Technologies. In the same year, a post graduate course in Applied Microbiology was also started.

In 1960, an Industrial Research Centre was started at Harcourt Butler Technological Institute (HBTI). In the same year, Essential Oil Scheme was transferred to the Director of Industries. A Head of Oils Technology was also appointed. In 1961, Applied Industrial Research scheme was started.

In the year 1963, many short term courses in Sugar and Oil technologies were started. In year 1965,the Institute was declared autonomous. Dr. C.R. Mitra was appointed as its First Director. In the same year, postgraduate courses in Biochemical Engineering, Food Technology, Oil Technology, Paint Technology, and Plastic Technology, were also started. For the first time in free India, a postgraduate course in Chemical Engineering Practice was started. Teaching Posts were also declared permanent.

1.7 International Collaboration

HBTI has completed two collaborative research projects with funding of Canadian International Development Agency through Shastri Indo-Canadian Institute. University of Guelph, Canada and HBTI has completed following two research projects. Department of Oil & Paint Technology collaborated both the projects with Prof. R.K. Trivedi as Principal Investigator.

1. Waste Management for sustainable Development in India.

2. Risk Assesment from Household products: Synthetic Detergents as study HBTI also hosted one India Semester for Canadian students in India.

2

The Grand Design

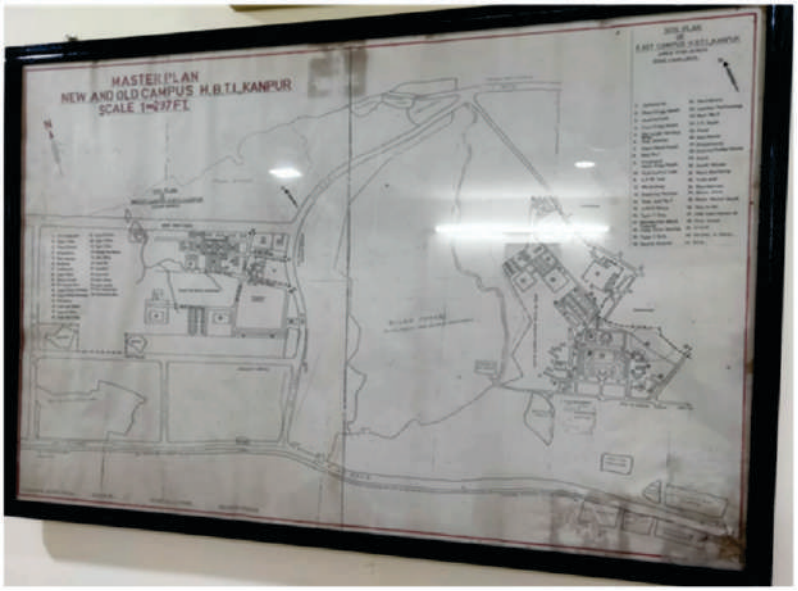
a seed that was sown ..... a seed that started growing ..... a seed that became a sapling ..... and today that small sapling has taken the shape of a great tree with over a hundred years of legacy ... stories ...culture ... happiness ... sorrow ... joy ... excitement ... and innovations ... this tree witnessed it all ..... A legend born a century ago ..... Got its name, as it is today, 100 years from its birth, the most prestigious institute that was and is the pride of our nation.....

2.1 Plan of the Grand Design

The huge trees take a long period of time to be formed, consume large amount of water, minerals and sunlight but they get erect from very tiny seeds. The seeds of Textile and Leather Industries were sown in the soil of Cawnpore (Kanpur) under the motivation of Sir Spencer Harcourt Butler, who wished Cawnpore (Kanpur) to follow the example of Leeds and Manchester and other great commercial centres of the West. Fourteen years before the Foundation-stone was finally laid, in 1907, Sir Harcourt Butler wrote a note proposing the foundation of a Technical Institute for Cawnpore (Kanpur), which was received with enthusiasm but was consigned, later on, in the Nainital meeting of the Indian Industrial Commission (1907), two institutes were confirmed, one at Roorkee for Engineering, and the other one at Cawnpore (Kanpur) for Chemistry. In years 1916-18, the Indian Industrial Commission suggested that, besides research work on industrial problems, Chemical Technology, Oil Chemistry and Technology, the schooling of these subjects should also be included in the institute. Sir Harcourt Butler in his speech expressed, "I will set no limits in the imagination for the future progress of Cawnpore and the United Provinces. I will not admit one argument against their destiny." One can easily sense dedication and desire in him to bring education and industries to Cawnpore (Kanpur). In his speech he said, "I can but hope that the future may witness greater interest, a larger boldness in our industrial policy, a determination to scrape off the mental moss, so luxuriant in this climate that chokes experiment and innovation."

2.2 The Foundation

No matter how dark things seem to be or actually are, raise your sights and see the possibilities – always see them, for they're always there." This is what Norman Vincent Peal believed …… the vision of developing Cawnpore into a technological hub that can stare in the eyes of the West kept Sir Spencer Harcourt Butler going …… making changes ....; taking small steps one at a time .... And thus the GRI (previously known as Government



The Grand Master Plan

Research Institute) that was started in the "Spooky building" of Cawnpore became the crown of Cawnpore/polestar of the East.

Plato once said, *"Opinion is the medium between knowledge and ignorance"*. Sir Harcourt Butler was of opinion that the application of science to industry and life was perhaps the greatest need of that time and that condition. So, an institute was required, which would teach and train the citizens in sciences and technology, and encourage research and innovation. The idea of 'Government Research Institute, Cawnpore' was proposed seeking the very necessity of an institute. The history of HBTU is practically the history of realization of the necessity of advancement in the field of science and technology in United Province (Uttar Pradeshand Uttarakhand). The site of the institute is within easy reach of the great industrial centre of Cawnpore (Kanpur). The foundation-stone was laid with the words of Sir Harcourt Butler affirming, "In hope and aspiration, which dare aver to be well-founded, I shall now gladly declare the foundation-stone of the Cawnpore Technological Institute to be well and truly laid."

2.3 The Kick Start

The Government Research Institute, Cawnpore was started in two rooms of Sherwali Kothi, which still exists at the north-west corner of the Company Bagh crossing, Nawabganj, Cawnpore (Kanpur) and tells about its glorious past. Dr. E.R. Watson of Dacca University was appointed as the first

Principal and Research Chemist with two Research Assistants, Mr. K.C. Mukherjee and Dr. N.G. Chatterjee. Mr. K. C. Mukherjee was an associate of Dr. Watson in Dacca University and came here along with him. Dr. N. G. Chatterjee was graduate of University of Allahabad. Dr. E. R. Watson and Mr. K. C. Mukherjee were Organic Chemists, while Dr. N. G. Chatterjee was an Inorganic Chemist. In Opium Section, there were two more persons appointed and working as Assistant Research Chemists, Dr. Sen and Mr. Mulani. The institute remained a research institute for several years.

In the year 1921, the institute started for teaching also, and hence, the institute was renamed to Government Technological Institute, Cawnpore. It was decided to take three students for training in Applied Chemical Research and three in Oil Technology and Chemistry. Thus, the teaching in the institute began with total six students. From 1921 to 1925, the institute was housed in Bungalow no. 1, 2 and 3 of Laxman Bagh, Cawnpore (Kanpur).

2.4 The Active Launch

but even after all of this ……. It is just a starting point of a long awaited journey ….. a journey that will be on of its own kind….. a journey full of thrills …. Excitement ….. endeavour….. excellence ….. joy and surprises……

The seedling now had started developing into a plant. In theyear 1926, the institute was again renamed to Harcourt Butler Technological Institute, Cawnpore. The institute, initially, was set-up having two formats of teaching-learning, viz. instruction and the research. Both the formats were made to be executed together. The institute started with few branches of Chemical Science namely Vegetable Oils, Leather and Tinctorial Chemistry. Vegetable Oils Chemistry was supposed to deal with possibilities in connection with paints and varnishes, soaps and detergents, vegetable butter and edible oils, etc. Leather Chemistry was designed for research and training in tanning agents, the extraction of tanning, the manufacture and purification of tallow and the making of glues. Tinctorial Chemistry aimed at studying dyeing, bleaching, mercerization and finishing of clothes.

In the beginning, two three-year diploma (post-graduate) courses were started viz. Chemical Research, and Oil Chemistry and Technology for Bachelor of Science (B. Sc.) students. In the first year, the course was common to both the sections, while the second and third years were dedicated to the specializations in the respective subject domains. Students of Oil Chemistry and Technology were sent for practical training in the local mills like Cooper Allen Mills. For the course of Applied Research, the students were given training in the workshops. Later on, these courses proved to be the pioneer in the development of Chemical, Textile and Leather industries, in and around

Cawnpore (Kanpur).

In the year 1928, Sugar Technology was added to the Institute's set of courses, which later in year 1936 was taken over by the Indian Council of Agricultural Research (ICAR), and was developed into a full-fledged Indian Institute of Sugar Technology. The Leather Technology course was closed in year 1933, which was later, again introduced in the institute's list of courses.

2.5 The New Dawn

There were many new sunrises of the institution, which had boosted its growth into a big tree. In the year 1964,basic character of the institution had changed. Uttar Pradesh Cabinet had declared the institution, a fully-autonomous institution, and then onwards, it was supposed to be governed by a Board of Governors (BoG) with the Chief Minister or his nominee as the Chairman of BoG. The post of the head of the institution was also changed from Principal to the Director. The staff, which was structured for a research institute, was now restructured for a teaching institute. Seven new undergraduate courses were introduced; viz. Electrical Engineering, Mechanical Engineering, Biochemical Engineering, Plastic Technology, Food Technology and Paint Technology. Among these courses / branches, Biochemical was the first in India, and Plastic Technology and Food Technology were the first in Uttar Pradesh. In the year 1965, these changes came into force. The institute had started functioning in autonomous mode. Dr. C.R. Mitra was appointed as its first Director. The Department of Civil Engineering was created in the Institute in the year 1966. The first ever Seminar in the area of Biochemical Engineering Training and Research in India was held in 1967 at this institute. In a span of just four years, from 1965 to 1969, the institute had developed into a full-fledged postgraduate teaching and research centre, attracting eminent scholars from country and abroad. The courses were thoroughly modernized and brought at par with the best anywhere in the world. The Department of Basic Sciences and Humanities werealso raised to full status, and were actively engaged in research. The product of institution was now competing with the best in the World.

2.6 The After Plan

Sir Harcourt Butler had very optimistically argued that, “We must not stand still. Let our motto be- on and ever on.” He had another motive apart from Chemical Engineering research, and it was, to train and send out young men, which are able to help existing industries in the province and establish the new ones. He asked not to be impatient with the immediate results of the institute, and to wait for the real output. The institution was fast growing. Attention was drawn towards Chemistry of Glass, manufacturing of Alkalis, making of Cement and the production of Starch.

At a later stage, large piece of land was acquired in the vicinity of the old campus, and it was planned that institution will have a fully independent campus with composite laboratories, lecture rooms, workshops, hostels, playgrounds, staff quarters, hospital etc.

2.7 The Admission Traditions

In the beginning, the admissionswere made after an interview by a committee, consisting of Industrial Chemist of Uttar Pradesh and the Principal of the institution. Both Biology and Mathematics background students were eligible for admission. A few seats were reserved as per state government and central government policies. Scholarships were given to the bright and meritorious students. In 1921, each student was given a scholarship of Rs.75/- per month, alongwith fee waiver.

2.8 The Construction of Edifice

Laboratories and theory classes were held in the then Government Soda Factory, which was later converted into Forest View Hostel. Later, it became office of the Assistant Engineer – Construction. Now, these have been converted into residences (near Canteen). With the completion of Luxmanbagh bungalows near Company Bagh, Nawabganj in 1922, the institute was housed in these bungalows. Bungalow No. 1 was given to Department of Applied Chemistry. Bungalow NO.2 was given to Workshop. Bungalow NO.3 was given to Department of Oil Technology.

The very first hostel of the institute was a bungalow of a Nawab near Government Central Textile Institute, Souterganj. Later, Bungalow No. 4 in the Luxmanbagh colony became a hostel of the Institue.

The present workshop building was completed in the year 1957. The workshop with pilot plants was now shifted from Luxmanbagh Bungalow No. 2 to its new premises. With the completion of the workshop building in the year 1957, Industrial Oil Mill, Soap Factory, paints and varnish manufacturing machines were putup there. That time, Full production of mustard oil, washing soaps, paints and varnish was done therin. The products mustard oil, washing soaps, etc. were sold among HBTI employees at very nominal prices. Later, these industrial plants were closed, and demolished. The first ever North Indian Chemical Engineering Pilot Plant, Distillation Units, Evaporators etc. were installed in the institute. These plants can still be seen there.

...today in the 21st century its worth is growing and it is still rising to in an endless peak of glory and success.... the best technical institution in the state of Uttar Pradesh ..... the best college of Abdul Kalam Technical University till 2016.... And now one of the states' best Technical University

…… and very soon it will gain another level….. rise once more to show its eminence and its capability to spread its wings and fly ….. like the eagle ….. hovering above the storm clouds …. challenging and proving itself on the way and then …..looking down on those pitiful clouds that thought they could stop the eagle from tearing apart the sky and reaching new heights……

2.9 Rise of the Phoenix

...year 2016, the year when the phoenix rose from its slumber…. to rise above all and rule the world…. to spread the word of its might and to make it known that the true monarch has returned…. the institution was granted the status of a University to become a centre of excellence with its focus on research and development and incubation in the fields of engineering, technology, basic and applied sciences, humanities, social science and management, architecture and other professional courses to promote studies, research and innovation in the areas of higher education…

The phoenix rose from its ashes, and embarked onits journey once again in the mid of year 1960s. Many rules and regulations had evolved, and the terms like Board, Chairman, Director, Society etc. were changed and redefined. The board consisted of a nominee of the state, secretary, representatives from the legislative assembly, vice chancellors from various prestigious institutions etc.The terms of offices were decided. The rules regarding the appointments and resignations of members of the board were also framed. The board meeting was compulsorily held in a period of three months with at least five members of the board or the society present, and it was mandatory for the chairman to preside over the meetings.

2.9.1 The Committees

Any financial aid that was to be taken either to improve infrastructure or related to allowances was provided by the state. Any structural changes necessitated approvals of StateGovernment. Later, several committees at institute level were constituted.

The Finance Committee consisted of either Chairman or his nominee, Secretary, UP Technical Education, two persons nominated by the Government and the Board, and the Director. The Committee meeting held once in a year with at least three members. All the details and reports of the meeting were to be sent to the Board.

The Academic Committee consisted of the Director (as the Chairperson), Deputy Director if any, Head of Teaching Departments, Librarian, Warden, Workshop Superintendent and three persons nominated by the Chairman. The Committee was responsible for the Curricula and Syllabi,and makingvarious arrangements for the examinations and also

appointing the Advisory Committee for academic matters. It also managed the Workshop and the Library. Promotion of research, quality assurance,inspections, stipends and scholarships disbursements, medals and prizes were also being undertaken by this Committee.

Every permanent employee of the State Government working in HBTI Kanpur, immediately before the setting of society, to serve the society, was on, and from the dates of Registration of the Society, was deemed to be an employee of the society, and was holding his office or services therein, for the same tenure with same remuneration. The employees worked to serve the society until his employment in the society was terminated.Any temporary employee, who wished to serve or work with the society was given a chance to do so based on his past records and performances, and all the employees were eligible to receive pension benefits, leave and the provident fund.

The duties of the concerned authority were assigned under the Act of 1963. Superiors had many powers. Students were given utmost importance. The rules were well-defined, and there was no room for any ambiguity

2.10 Walking The Extra Miles - Adopting University Culture

The Institute was upgraded to University vide U.P. Act no. 11 of 2016, No. 586(2)/LXXIX-V-1 16-1(ka)-10-2016, dated April 07, 2016 for making it a leading residential University so as to become a centre of excellence with focus on research and development and incubation in the fields of engineering, technology, basic and applied sciences, humanities, social sciences and management, architecture and other professional courses, and to promote studies, research and innovation in emerging areas of higher education, and to further skill development through continuing education program and knowledge incubation. The University also aims to achieve excellence in higher technical education and other matters connected therewith or incidental thereto.The University strives to function more efficiently as the teaching and research centre to meet the requirement of higher education and research in the field of engineering and technology, applied sciences and management sciences, foster industry relevant research & innovation and to avail better scopes and opportunities to serve the society and Nation. The Vision of the University is “To achieve excellence in technical education, research and innovation.”The Mission of the University comprises;

1. Imparting Knowledge to develop analytical ability in science and technology to serve the industry and society at large.

2. Equip and enable students with conceptual, technical and managerial skills to transform the organization and society.

3. Inculcating entrepreneurial philosophy and innovative thinking to promote research, consultancy and institutional social responsibility.

4. Serving people, society and nation with utmost professionalism, values and ethics to make development sustainable and quality of life.

University has four Schools namely, School of Engineering; School of Chemical Technology; School of Basic & Applied Sciences and School of Humanities & Social Sciences. The School of Engineering comprises Department of Civil Engineering, Department of Computer Science and Engineering, Department of Electrical Engineering, Department of Electronics Engineering and Department of Mechanical Engineering. The School of Chemical Technology comprises Department of Bio-Chemical Engineering, Department of Chemical Engineering, Department of Food Technology, Department of Leather Technology, Department of Oil Technology, Department of Paint Technology, and Department of Plastic Technology. The School of Basic and Applied Sciences comprises Department of Chemistry, Department of mathematics and Department of Physics. The School of Humanities and Social Sciences comprises Department of Humanities

Various authorities of the University are Chancellor, Vice Chancellor, Pro Vice-Chancellor, Registrar, Finance Controller, Dean of Academic Affairs, Dean of Continuing Education and lntemal Quality Assurance, Dean of lncubation Hub, Dean of Planning and Resource Generation, Dean of Research & Development, Dean of Student's Welfare, Dean of University Schools, Head of University Department/Centre/Unit and Controller of Examimitions.

3

The Expansion

It's a matter of pride to mention that initially Sugar Technology, Textile Technology and Glass Technology programs were started from HBTI campus itself. Initially the Imperial Institute of Sugar was started in year 1936 at HBTI East Campus Nawabganj Kanpur. Later on the Sugar Technology program expended to take a shape of a well known institute known as National Sugar Institute (NSI) in April 1957. The NSI was shifted from HBTI campus to its present premises at Kalyanpur in 1963. Similarly another prestigious institute known as Indian Institute of Technology (IIT) Kanpur also started at HBTI campus in 1960 which was also later shifted to its present campus at Kalyanpur, Kanpur. HBTI also housed a Glass Technology Center running under the Directorate of Industries (DI), Kanpur. In addition HBTI also mentored for a couple of years the Government Engineering colleges named Rajkiya Engineering College, Bijnor (UP), Rajkiya Engineering College, Mainpuri (UP) and Rajkiya Engineering College, Kannauj (UP). Based on our infrastructure, performance and quality research HBTI was selected for funding by World Bank Project called Technical Education Quality Improvement Program (TEQIP) as one amongst 127 reputed technical institutions in the country. Similarly a prestigious IMPACT scheme of Government of India was also granted to the Institute.

3.1 Academics

Presenlty, the University has four Schools namely, School of Basic & Applied Sciences; School of Chemical Technology; School of Engineering; and School of Humanities & Social Sciences.

(I) School of Basic & Applied Sciences

i. Department of Chemistry

The Department of Chemistry is one of the oldest departments of HBTU, Kanpur established in 1924. The department has formulated a dynamic and relevant curriculum for UG programs being run in the University and possesses an excellent infrastructure. The basic aim of this department is to introduce a new combination of theoretical studies, technologies in industrial applications and research oriented activities. To carry out research in cutting edge areas, both of basic and applied nature, at par with international standards the Ph.D. Students are educated and trained to become world class scientists.In the Centenary Year, department has introduced Masters Program M.Sc. in Chemical Sciences from the session 2021-22 with an intake of 30 students. The department is globally recognized for its outstanding research in polymer science, solar energy

conversion and storage, chemical kinetics, synthesis and evaluation of biological activities, water treatment, coordination chemistry and spectroscopy. The department has suitable infrastructure supported by modem equipment to train the students.The department imparts education in Physical, Inorganic, Organic, Analytical and industrial Chemistry at UG and Ph.D. level. The department has excellent research outputs that are comparable to any High profile academic institution. The department has completed several research programs/schemes sponsored by the national funding agencies like UGC, CSIR, DST, ICAR, DST. ICAR, UPCAST, AICTE etc. The qualified and dedicated faculty of department have published a good number of research papers in National and International (Over 425) journals of repute. The department also imparts testing and consultancy facilities to the industries of Kanpur and nearby areas to improve the quality of their products. The main strength of the department has been research and development for the last nine decades. The names of various Heads of the Department of Chemistry in chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. R.S. Tewari	1983 -90
2.	Dr. A.K. Srivastava	1990 -92
3.	Dr. P.C. Dwivedi	1992 -2008
4.	Prof. D.K. Singh	2008 -11
5.	Prof. S.K. Upadhyay	2011 -15
6.	Prof. S.U. Siddiqui	2015 -16
7.	Dr. Chhagan Lal	2016 -19
8.	Prof. Rekha Bali	2019 -21
9.	Dr. Chhagan Lal	2021 - till date

ii. Department of Mathematics

The Department of Mathematics has been striving hard for excellent teaching and research in Mathematical Sciences since its inception in 1961. The undergraduate and postgraduate students of various chemical technology and engineering departments are enriched/equipped with in-depth theoretical background of sophisticated applied mathematics required for modern scientific investigations and technological developments and

practical training in numerical computing by following a need-based designed curriculum. The Department runs a doctoral research programme for carrying out research in interdisciplinary areas.In the Centenary Year, department has started Masters Program M.Sc. in Mathematics & Data Science from the session 2021-22 with an intake of 30 students. The faculty of the department are actively engaged in research in emerging thrust areas viz. mathematical modeling, ecological and environmental systems, mathematical biology, biomechanics, fluid dynamics of the eye and cerebrospinal fluid, blood flow dynamics.Facilities for interdepartmental and interdisciplinary research activities have also been evolved. The Department is well equipped with computing and internet facilities. A number of research projects sponsored by different organizations like CSIR, CST-UP, UGC, DST and ICMR have been completed. Also, various conferences, seminars, workshops, summer and winter schools have been organized by the department. Apart from this, the faculty members of the department also regularly visit to deliver lectures in national and intenational conferences and seminars outside. The experienced and research dedicated team of faculty members have presented/ published good numbers of research papers. More than 65 students have been awarded Ph.D. degree under the supervision of departmental faculty members and at present 05 students are registered for Ph.D. Programme. The names of various Heads of the Department of Mathematics in chronological order are given below:

Sl.No.	**Name**	**Duration**
1.	Prof. P.N. Tandon	1983 - 91
2.	Prof. A.P. Dwivedi	1991 - 2000
3.	Prof. Shyam Lal	2000 - 01
4.	Prof. S.U.Siddiqui	2003 - 06
5.	Prof. Rekha Bali	2006 - 09
6.	Prof. Ram Autar	2009 - 12
7.	Prof. Ram Naresh	2012 - 15
8.	Prof. S.U. Siddiqui	2015 - 18
9.	Prof. Rekha Bali	2018 - 21
10	Prof. Ram Autar	2021 - till date

iii. **Department of Physics**

The Department of Physics was established in 1961. It caters to the needs of undergraduate and postgraduate students of Engineering and Technology. Department has very qualified faculty members and contributes handsomely to research activities of the University apart from the Ph.D. Program. In the Centenary Year, department has launched Masters Program M.Sc. in Physics & Optoelectronics from the session 2021-22 with an intake of 30 students.The department faculty is also involved in research and development activities and very large number of quality research papers have been published in reputed National and International journals. The names of various Heads of the Department of Physics in chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. A.N. Nigam	1983 -90
2.	Dr. D.N.S. Srivastava	1990 - 2008
3.	Prof. Ashok Kumar	2008 -16
4.	Prof. R.K. Shukla	2016 -18
5.	Dr. S.K. Sharma	2018 -21
6.	Prof. R.K. Shukla	2021 - till date

(I) School of Chemical Technology

i. Department of Bio-Chemical Engineering

Department was established in 1964 as twin departments of Bio-Chemical Engineering and Food Technology, Departement of Bio-Chemical Engineering came into existence with the inception of Harcourt Butler Technical University, Kanpur on Spetember 01, 2016. Departement is running a B.Tech program with intake of 30 students it also offers a full time M.Tech. and Ph.D. Programs in Chemical Technology with specialization in Bio-Chemical Engineering. However the intake has been increase to 60 from academic session 2021-22. Department is known to have a highly qualified, experienced and competent faculty members. The Department has well equipped laboratories with modern facilities to meet out necessities of the students. The Department has successfully completed several research projects sponsored by Government Agencies likeDST, CST-UP, DBT, CPCB and Industry with publication of quality research. The

Department is headquarter of ABEFT and Kanupr Chapter of Association of Food Scientists and Technologists of India (AFSTI). The Department has an excellent placement in renowened area of Bio-Process and Allied Industries, Regulatory Agencies, Teaching & Research in reputed National and International Institutions like IITs, NITs, and DBT Institutions. The names of various Heads of the Department of Bio-Chemical Engineering in chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. K. Das	1964 - 65
2.	Prof. T.K. Ghosh	1965 - 66
3.	Dr. Sundar Rajan	1966 - 67
4.	Prof. W.R. Damle	1967 - 68
5.	Mr. Gauri Shankar	1968 - 70
6.	Dr. V.H. Potty	1970 - 72
7.	Prof. Gauri Shankar	1971 - 73
8.	Prof. W.R. Datey	1973 - 75
9.	Prof. Gauri Shankar	1975 - 82
10	Prof. N.D. Shiralkar	1982 - 86
11.	Prof. Gauri Shankar	1986 - 99
12.	Prof. P.N. Maheshwari	1999 - 2002
13.	Prof. V.K. Jain	2002 - 07
14.	Mr. Raj Kumar	2007 - 09
15.	Prof. Karunakar Singh	2009 - 12
16.	Mr. Brajesh Singh	2012 - 15
17.	Mr. S.J. Nagar	2015 - 18
18.	Prof. Deepak Srivastava	2018 - 19
19.	Mr. Brajesh Singh	2019 - till date

i. Department of Chemical Engineering

In order to impart Chemical Engineering Education, in year 1954 Chemical Engineering Department was established with two programs for awarding undergraduate degrees of AHBTI and FHBTI. Thereafter, in year 1958, two new full-fledged undergraduate programs were started leading to degrees in Chemical Engineering after four years study.

The Department was entrusted with the responsibility to teach and guide fundamental principles of Chemical Engineering and their applications to the students of Chemical Engineering and Chemical Technology and later on to the students of Leather Technology as well. The department has been running regular and part-time M.Tech. programs.

In addition to that, the department also runs regular and sponsored Ph.D. program. The department is also approved QIP centre for two seats of Ph.D. The Department has built up a comprehensive research infrastructure with top-notch facilities for carrying cutting-edge research and quality teaching. Constant efforts are being made to maintain and enhance the high standards of this department to be ranked always as one of the best in India. The Department strives to provide its students with facilities and environment conducive for creative and dynamic work.

This department has run several research schemes sponsored by various Government Funding agencies such as UGC, CSIR, DST, BARC, ICAR, CST-UP, MHRD, CIDA(Canada), TEQIP. The faculty has extensively contributed by writing books and publishing good number of research papers in national and international journals of repute. The department has organized a number of National and International seminars, workshops, and short courses.

The department has been granted accreditation for three terms for the periods, 2003-06, 2008-11 and 2013-16. It has strong alumni base, who are serving in varied areas as technocrats, entrepreneurs, academicians, researchers and administrators in Government and Corporate Sectors. Department is serving the nation since its inception and the students passed out have been active at international level as well.

The department has excellent placement record in terms of quality and number. B.Tech. students have been securing good ranks in GATE, CAT and other examinations. Apart from academics, the students are actively participating in sports, games, cultural and technical events. The names of various Heads of the Department of Chemical Engineering in

chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. H. Trivedi	1954 -58
2.	Dr. J. B. Lal	1958 -66
3.	Prof. R. P. Singh	1966 -69
4.	Dr. J. B. Lal	1969 -70
5.	Prof. G.H .Schroff	1970 -72
6.	Prof .G.N. Pandey	1972 -83
7.	Prof. R.P. Singh	1983 -87
8.	Prof .D.N. Saxena	1987 -99
9.	Prof. N.P. Shukla	1999 - 2000
10	Prof. S.K .Awasthi	2000 -03
11.	Prof. O. P. Rama	2003 -06
12.	Prof. A.K. Mishra	2006 -09
13.	Prof. S.R. Vidyarthi	2009 -14
14.	Prof. Ram Prasad	2014 -16
15.	Dr. S.K. Gupta	2016 -19
16.	Prof. Pramod Kumar	2019 -20
17.	Prof. Deepak Srivastava	2020 -20
18.	Dr. Rajesh Katiyar	2020 - till date

i. Department of Food Technology

The Department of Biochemical Engineering and Food Technology was established in 1964 as a twin department of Bio-chemical Engineering and Food Technology. The Department of Food Technology came into independent existence with the inception of Harcourt Butler Technical University, Kanpur on September 01, 2016. Department is running a

B.Tech. program with an intake of 30 students which has been enhanced to 60 with effect from 2021. It also offers a full time M. Tech. programme in Chemical Technology with specialization in Food Technology. The Department has well equipped laboratories with modern facilities to meet out necessities of different programs. The Department was accredited by National Board of Accreditation (NBA) thrice in 2003 for three years, 2008 for three years and 2013 for three years. The Department is known to have highly qualified, experienced and very competent faculty members to cover the entire area of FoodProcessing and Technology. As a consequence, the department has impressive research publications in International and National Journals. The Department has successfully compeleted several research projects sponsored by Governement Agencies viz.MoFPI, DBT, CST-UP etc. and Industries. The Department has an excellent placement record to cater National and International Food Processing Industries like Cadbury, Amul, Britannia, Parle, Kissan, ITC, Pepsico etc. The alumni of the department are working in various Government Regulatory authorities viz. FSSAI, MoFPI, Agmark etc. and in teaching and research in reputed institutions like CFTRI-Mysore, NIFTEM-Haryana, SLIET-Punjab, ICT-Mumbai etc. The Association of Food Scientists and Technologists (India) Kanpur chapter is also working in the department. The names of various Heads of the Department of Food Technology in chronological order are given below:

Sl.No.	**Name**	**Duration**
1.	Dr. K. Das	1964 - 65
2.	Prof. T.K. Ghosh	1965 - 66
3.	Dr. Sundar Rajan	1966 - 67
4.	Prof. W.R. Damle	1967 - 68
5.	Mr. Gauri Shankar	1968 - 70
6.	Dr. V.H. Potty	1970 - 72
7.	Prof. Gauri Shankar	1971 - 73
8.	Prof. W.R. Datey	1973 - 75
9.	Prof. Gauri Shankar	1975 - 82
10	Prof. N.D. Shiralkar	1982 - 86

11.	Prof. Gauri Shankar	1986 -99
12.	Prof. P.N. Maheshwari	1999 - 2002
13.	Prof. V.K. Jain	2002 -07
14.	Mr. Raj Kumar	2007 -09
15.	Prof. Karunakar Singh	2009 -12
16.	Mr. Brajesh Singh	2012 -15
17.	Prof. Karunakar Singh	2015 -18
18.	Prof. Alak Kumar Singh	2018 - till date

i. Departmnt of Leather Technology

The Department of Leather Technology was established in 1978 to meet the specific demand of skilled/trained manpower in the emerging areas of Leather Industry. It offers a B.Tech. program in Leather Technology with intake of 20 students which has been enhanced to 30 students with the effect from 2021. The Department has contributed by way of paper publications in National/International journals of repute and by paper presentations in National/International conferences.The Department has good placement record in renowned Leather Finishing and Processing as well as Leather goods manufacturing Industries. The Local Industrial visits for practical exposure to the students are frequently organized by the department to nearby Leather Industries located at Kanpur. The names of various Heads of the Department of Leather Technology in chronological order are given below:

Sl.No.	**Name**	**Duration**
1.	Dr. K.K. Nigam	1983 -85
2.	Dr. G.N. Mathur	1985 -86
3.	Prof. D.N. Saxena	1987 -99
4.	Prof. N.P. Shukla	1999 - 2000
5.	Prof. S.K. Awasthi	2000 -03
6.	Prof. O. P. Rama	2003 -06

7.	Prof. A.K. Mishra	2006 -09
8.	Prof. S.R. Vidyarthi	2009 -14
9.	Prof. Ram Prasad	2014 -16
10	Dr. S.K. Gupta	2016 -16
11.	Mr. Sumant Chatterjee	2017 -20
12.	Prof. Deepak Srivastava	2020 -21
13.	Mr. Sumant Chatterjee	2021 - till date

i. Department of Oil Technology

Initially, the Department of Oil Technology & Paint Technology (Created after formation of HBTU in 2016) formed a twin department named Oil & Paint Technology till 2016. After formation of University in 2016, the Departement of Oil Technology started functioning as an independent department. It offers a B. Tech. programme in Oil Technology with an intake of 30 students which has been enhanced to 60 students with the effect from 2021.

Department also offers M.Tech. programme in Chemical Technology with specialization in Oil Technology. The Department is also running regular Ph.D. program. Based on Quality of Infrastructure and performance of the department, it was accredited thrice for three years each by NBA. The Department is known to have highly qualified, experienced and very competent faculty members to cover the entire area of Vegetable Oil Processing and Product Technology. As a consequence, the department has impressive research publications in International and National Journals.

The Department has successfully compeleted several research projects sponsored by Governement Agencies and Industries. The Department was declared as a Centre of Excellence for research in the area of Lipid Science and Polymer. Department has well-furnished laboratory facilities, approved by the Government, for providing the testing and quality certification to Government and private agencies related to edible Oil.

A new state-of-the-art Advanced Surfactant Laboratory has been developed through TEQIP-II funds. Department has an excellent placement record. In the year 1943 Oil Technologists' Association of India (OTAI) a non-profit organization was established by Late Rao Saheb D.Y. Athawale, Ex-Principal of Harcourt Butler Technological Institute (HBTI), Kanpur and the then Oil expert to the Government of Uttar Pradesh.The names of

various Heads of the Department of Oil Technology in chronological order are given below:

Sl.No.	Name	Duration
1.	Mr. J.A.H. Duke	1921 -29
2.	Dr. N.G. Chaterjee	1930 -37
3.	Mr. Rao Saheb D.Y. Athwale	1937 -47
4.	Mr. Om Prakash Gupta	1947 -60
5.	Dr. Bhola Nath	1961 -64
6.	Mr. A.C. Gupta	1964 -72
7.	Mr. T.R. Sharma	1972 -74
8.	Dr. A.K. Vashistha	1974 -83
9.	Dr. S. Chandra	1983 -89
10.	Dr. M.S. Saxena	1989 -94
11.	Dr. A.K. Vashistha	1994 -96
12.	Dr. M.C. Shukla	1996 -99
13.	Dr. R.P. Singh	1999 -2002
14.	Dr. R.K. Khanna	2002 -05
15.	Dr. Devendra Agarwal	2005 -08
16.	Dr. Pramod Kumar	2008 -11
17.	Dr. R.K. Trivedi	2011 -14
18.	Dr. V.K. Tyagi	2014 -16
19.	Dr. R. K. Trivedi	2017 -2020
20.	Dr. Deepak Srivastava	2020 -2020
21.	Dr. Alak Kumar Singh	2020 - till date

i. Department of Paint Technology

Initially, the Department of Oil Technology & Paint Technology (Created after formation of HBTU in 2016) formed a twin department named Oil & Paint Technology till 2016. After formation of University in 2016, the Department of Paint Technology started functioning as an independent department. Earlier the education in Paint Technology was started in 1921 and later strengthened in 1964 with 3 years Post B.Sc. B. Tech. ProgrammeIn 1991, it was converted to a four year post Intermediate B.Tech. programme. The Department has been running full fledged regular B.Tech. Program with intake of 30 students which has been enhanced to 60 students with the effect from 2021. The Department is also running regular Ph.D. program and M.Tech. program. Based on Quality of Infrastructure and performance of the department, the department was accredited twice for five years each by NBA. The Department is known to have highly qualified, experienced and very competent faculty members to cover the entire spectrum of Paint Technology. As a consequence, the department has impressive research publications in International and National Journals. The Department has successfully compeleted several research projects sponsored by Governement Agencies and Industries. Department has well-furnished laboratory facilities, approved by the Government, for providing the testing and quality certification to Government and private agencies related to surface coatings. The Department has almost 100% placement in renowned paint manufacturing Industries like Asian Paints Ltd. Kansai Nerolac Paints Ltd. etc. and paint application industries like, Maruti, Tata Motors, etc. Department is also authorised training centre in paints. The Department is headquarter of Paint and Coating Technologists Association (PACT) in which faculty members and students are actively involved. The names of various Heads of the Department of Paint Technology in chronological order are given below:

Sl.No.	Name	Duration
1.	Mr. A.C. Gupta	1964 - 72
2.	Mr. T.R. Sharma	1972 - 74
3.	Dr. A.K. Vashistha	1974 - 83
4.	Dr. S. Chandra	1983 - 89
5.	Dr. M.S. Saxena	1989 - 94
6.	Dr. A.K. Vashistha	1994 - 96
7.	Dr. M.C. Shukla	1996 - 99

8.	Dr. R.P. Singh	1999 - 2002
9.	Dr. R.K. Khanna	2002 - 05
10	Dr. Devendra Agarwal	2005 - 08
11.	Dr. Pramod Kumar	2008 - 11
12.	Dr. R.K. Trivedi	2011 - 14
13.	Dr. V.K. Tyagi	2014 - 17
14.	Prof. P.K. Kamani	2017 - 20
15.	Prof. Arun Maithani	2020 - till date

i. Department of Plastic Technology

The Department of Plastic Technology was established in 1964. At that time B.Sc. Chemical Technology degree course of 3-year duration was started. In 1991 the course was upgraded to B.Tech. 4-year degree course after 10+2.Besides this, department also offers Doctoral programme in Plastic Technology & Applied Chemistry.The Department has been running full fledged regular B.Tech. Program with intake of 30 students which has been enhanced to 60 students with the effect from 2021. The Department is also running regular Ph.D. program and M.Tech. program. Based on Quality of Infrastructure and performance of the department, the department has been accredited since 2003 and latest in 2019 twice for three years each by National Board odAccredidation (NBA). The curriculum of these programs encompasses latest developments in the field as well as present and future needs of the industry.The Department has built up a comprehensive research infrastructure with top-notch facilities for carrying cutting-edge teaching and research. Constant efforts are being put up to maintain the high standards of this department to be ranked as one of the best in India. The Department strives to provide its students with facilities and environment that are conducive for creative and dynamic work.The Department has contributed by way of paper publications in National/International journals of repute and by paper presentations in National/International conferences. The department has run various R&D projects sponsored by AICTE, DMSRDE, UPCST etc. It has also undertaken relevant research projects, which serves the interest of the industries.The Plastic Technology Department is proud of its excellent infrastructure and its role in providing the best professionals to the nation. The Department has almost 100% placement in renowned Plasticand Paint Industries like Asian Paints

Ltd.,Burger Paints Ltd., Maruti, Reliance, Exxon Mobil, Tata Motors etc. Recently, National Board of Accreditation has accredited the B.Tech. Programme in Plastic Technology.The department hosts a student chapter name Polymer Engineers & Technologists Association (PETA). The names of various Heads of the Department of Plastic Technology in chronological order are given below:

Sl.No.	Name	Duration
1.	Prof. Mangaraja	1964 - 68
2.	Prof. A.K. Ghosh	1968 - 71
3.	Prof. B.C. Mitra	1971 - 74
4.	Prof. G.N. Mathur	1974 - 94
5.	Prof. J.S.P. Rai	1994 - 99
6.	Prof. A.K. Nagpal	1999 - 2002
7.	Prof. J.S.P. Rai	2002 - 05
8.	Prof. A.K. Nagpal	2005 - 08
9.	Prof. J.S.P. Rai	2008 - 11
10	Prof. A.K.Nagpal	2011 - 14
11.	Prof. Reena Singhal	2014 - 17
12.	Prof. Deepak Srivastava	2017 - 20
13.	Prof. Indira Nigam	2020 - till date

(I) School of Engineering

i. Department of Civil Engineering

The Department of Civil Engineering was established in year 1966. It is one of the premier departments of the Institute. The department offers a full time undergraduate degree programme in Civil Engineering and postgraduate degree programme in Environmental Science and Engineering. The department also offers two 3-years part time postgraduate degree programmes in Structural Engineering and Soil Mechanics & Foundation Engineering. The curriculum of these programs encompasses

latest developments in the field as well as present day and future needs of Industries. The department has well developed laboratories with all essential facilities for running undergraduate and postgraduate programs. The major equipment available in the departments includes fire furnace, core cutter apparatus, ultrasonic concrete tester, universal testing machine, loading frame, electronic total station, U.V. spectrophotometer, rock core cutting machine, electrical resistivity meter, vehicle counting and classifier, hand held traffic speed radar gun, Francis turbine etc. The students have an in-depth exposure to the computing environment using CAD, sewer CAD, storm CAD, STAAD.Pro, Auto desk education solution set and Arc view. The department has a well-furnished building housing ten laboratories, three classrooms, one tutorial room, one Drawing hall, library, departmental office and separate rooms for faculty. The department is among the best in the Institute in terms of practical exposure and institute - industry interaction.

The department has learned and dedicated faculty members contributing towards research and development and continuing education programmes. Over the years, industrial interaction has increased and today the annual external funding in the department runs to more than 100 Lakhs as industrial consultancy. The names of various Heads of the Department of Civil Engineering in chronological order are given below:

Sl.No.	**Name**	**Duration**
1.	Dr. S.N. Tripathi	1966 - 72
2.	Dr. B. Satyanarayana	1972 - 82
3.	Mr. G.K. Vasishtha	1982 - 83
4.	Dr. S.N. Tripathi	1983 - 2000
5.	Dr. C.V.S.Kameshwar Rao	2000 - 01
6.	Dr. D.L. Parmar	2001 - 03
7.	Mr. H.S. Niranjan	2003 - 06
8.	Dr. Sunil Kumar	2006 - 09
9.	Mr. H.S. Niranjan	2009 - 09
10	Dr. Sunil Kumar	2009 - 12
11.	Dr. D.L. Parmar	2012 - 15

12.	Dr. Sunil Kumar	2015 - 18
13.	Dr. Pradeep Kumar	2018 - 21
14.	Dr. Dipteek Parmar	2021 - till date

i. Department of Computer Science & Engineering

The Department of Computer Science & Engineering was established in 1984. It runs a B.Tech. programme in Computer Science & Engineering with an intake of 60 students. The Master of Computer Application programme was introduced in 1987 with an intake of 60 students. Later on B. Tech. Information Technology programme with an intake of 30 students was introduced in the year 2000 on the recommendations of IT Task Force, which has been enhanced to 60 students with the effect from 2021. The Department has a very good interaction with industry and other educational institutions.

The names of various Heads of the Department of Computer Science & Engineering in chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. V.K. Jain	1986 - 98
2.	Dr. Rajiv Mishra	1998 - 2001
3.	Dr. Raghuraj Singh	2001 - 04
4.	Dr. Vinay Kumar Pathak	2004 - 07
5.	Dr. Raghuraj Singh	2007 - 10
6.	Dr. Narendra Kohli	2010 - 12
7.	Dr. Vinay Kumar Pathak	2012 - 13
8.	Dr. Raghuraj Singh	2013 - 14
9.	Dr. Narendra Kohli	2014 - 17
10	Dr. B.K. Tripathi	2017 - 18
11.	Dr. Raghuraj Singh	2018 - 21
12.	Dr. Narendra Kohli	2021 - till date

i. Department of Electrical Engineering

The Department of Electrical Engineering was established in 1965. It is one of the oldest and premier engineering departments of the university. The number of the students having completed their undergraduate program has reached the 1500 figure mark. The department has been playing a vital role in producing scientists and engineers of the highest possible caliber ever since its inception. Apart from offering a bachelor's degree programme in electrical engineering, the department also offers part time master degree programme in power electronics and control discipline and part time and regular doctor of philosophy programmes. The department has an annual intake of 33 students in the undergraduate B.Tech. programme, and 10 in Post Graduate M.Tech. Degree Programme and around 5 in PhD programme. The department has been playing a pioneer role in producing world-class engineers and researchers. The department has rich and experienced faculty members with very wide exposure. The department has distinguished faculty, all holding degrees from renowned institutes and universities. The faculty member(s) of this department hold patents, have authored a good number of books and also guided a good number of M.Tech. theses, Ph.D. theses.

The commitment and dedication, punctuality, experience, expertise and enriched knowledge of the faculty members are few among many the distinguishing features of this department.

The names of various Heads of the Department of Electrical Engineering in chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. S.K. Guha	1964 -70
2.	Dr. K.R.M. Rao	1970 -12
3.	Dr. V.K.Jain	1972 -88
4.	Dr. K. K. Ghosh	1988 -03
5.	Dr. Shiv Narain	2003 -04
6.	Dr. K.A. Mishra	2004 -07
7.	Mr. S.K. Mishra	2007 -10
8.	Mr. J.K. Dwivedi	2010 -11
9.	Mr. S.K. Mishra	2011 -13

10	Prof. J.S.P. Rai (Director)	2013 - 13
11.	Prof. Yaduvir Singh	2013 - 16
12.	Mr. J.K. Dwivedi	2016 - 19
13.	Prof. Yaduvir Singh	2019 - till date

i. Department of Electronics Engineering

The Department of Electronics Engineering was established in 1984. It has committed Faculty members for taking care of academic and other requirements of the students. It offers B. Tech. in Electronics Engineering with an intake of 60 (Sanctioned intake) and a full time M.Tech. in Electronics and Communication Engineering with an intake of 18 (Sanctioned intake). In addition to the Ph.D. programme there are two seats under QIP and one seat under TEQIP II as research cum teacher fellow.

There are seven Ph.D. scholars under QIP/TEQIP Besides this Department is also offering regular Ph.D. programmes as per HBTU ordinances. The Department has successfully implemented many sponsored projects funded by World Bank and Swiss Govt. AICTE, DST, DrDO and TEQIP.

The Board of Studies of the Department regularly updates the syllabus to meet the requirements of Industry and Academia. The Department has well equipped labs and software for Virtual Instrumentation, VLSI Design, PCB Design, Signal VI SE Processing, Optical Networks etc. Various extracurricular activities are regularly organized by the students under the aegis of Association of Electronics Engineers for their overall development.

The students of the Department are well placed in Govt. Sector, Private Sector, MNCs, Civil Services, Academics and R & D. A good number of students also go for higher education in IISc, IITs, IIMs and in reputed foreign universities for masters and doctoral programs. The faculty of the Department is well qualified and associated with Institutes of reputelike IIIs, IISC. NITs and has published several papers in refereed Journals and Conferences of National and International repute. The Faculty members of the Department are continuously involved in R & D activities with their research students. Several National Level Seminars, Conferences, Faculty Development Programs, Expert Lectures, Workshops etc have been organized by the department.

The department is also growing in terms of infrastructure. Various grants have been received from AKTU, TEQIP and RUSA (National Higher

Education Mission) MHRD for equipment and separate buildings of the department. The names of various Heads of the Department of Electronics Engineering in chronological order are given below:

Sl.No.	Name	Duration
1.	Prof. V.K. Jain	1984 -90
2.	Dr. K. K. Tripathi	1990 -2000
3.	Shri Bal Gopal	2000 -2001
4.	Dr. Trishla Gupta	2001 -2003
5.	Dr. Dharmendra Singh	Mar. 2003 -Nov. 2003
6.	Dr. Rachna Asthana	Nov. 2003 -Jan. 2007
7.	Dr. Rajni Bisht	Jan. 2007 -Jan.2010
8.	Dr. Kirshna Raj	Jan.2010 -July 2011
9.	Dr. Rajni Bisht	July 2011 -Oct. 2015
10	Dr. Rachna Asthana	Oct. 2015 -Oct. 2018
11.	Dr. Kirshna Raj	Oct. 2018 -Oct. 2021
12.	Dr. A. K. Shankhwar	Oct. 2021 -Till Date

i. Department of Mechanical Engineering

The Department of Mechanical Engineering was established in year 1964, with an intake of 30 students and currently runs a regular B. Tech. programme in Mechanical Engineering with student intake of 60. Department of Mechanical Engineering runs a regular M. Tech. programme in Computer Aided Design (CAD) with an intake of 18 students. Department was also offering two part-time programmes in the past viz. M. Tech. in Mechanical Engineering Design and M. Tech. in Industrial System Engineering with 10 seats in each. Department of Mechanical Engineering is a recognized QIP Centre for PhD programme with 2 seats. Department of Mechanical Engineering has committed faculty members and most of them have obtained their PhDs from reputed institutes (IITs/NITs) and reputed Universities. Many research projects sponsored by DST, CST-UP and DICrunning in the Department of Mechanical Engineering of the institution. Association of Mechanical Engineers (AME), a student chapter,

is also actively functional in the Department. The names of various Heads of the Department of Mechanical Engineering in chronological order are given below:

Sl.No.	Name	Duration
1.	Dr. S. Prasad	1966 -74
2.	Dr. S.K. Bhave	1974 -75
3.	Dr. N. L. Kachhara	1975 -81
4.	Dr. R.K. Jain	1981 -84
5.	Dr. N. L. Kachhara	1984 -91
6.	Dr. S.J. Pandey	1991 -99
7.	Dr. A.P. Verma	1999 -2002
8.	Dr. S.J. Pandey	2002 -05
9.	Dr. B.K. Mishra	2005 -07
10	Dr. Rajive Gupta	2007 -09
11.	Dr. Onkar Singh	2009 -11
12.	Dr. Rajive Gupta	2011 -11
13.	Dr. Onkar Singh	2011 -13
14.	Sri. Rahul Gupta	2013 -15
15.	Dr. S.K. Singhal	2015 -15
16.	Sri Rahul Gupta	2015 -16
17.	Dr. S.K. Singhal	2016 -16
18.	Dr. Anand Kumar	2016 -19
19.	Dr. Rajive Gupta	2019 -till date

(I) School of Humanities & Social Sciences

i. Department of Humanities

The Department of Humanities was established in 1965. It caters to the needs of undergraduate and postgraduate students of Engineering and Technology. It also offers courses to MCA students. Department has very

qualified faculty members and contributes handsomely to research activities of the University. Departments offer PhD admissions in Economics and Management streams.The names of various Heads of the Department of Humanities in chronological order are given below:

Sl.No.	**Name**	**Duration**
1.	Dr. K.M. Mohapatra	2008 - 11
2.	Dr. (Mrs.) Bandna Nigam	2011 - 14
3.	Dr. K.M. Mohapatra	2014 - 18
4.	Dr. (Mrs.) Bandna Nigam	2018 - 21
5.	Dr. V.K. Yadav	2021 - till date

3.2 Construction of Buildings

Since its inception, to provide state of art needed infrastructure facilities, from time to time various edifices were envisioned and constructed for providing ample infrastructure for efficient teaching learing process, while keeping in view national and global requirements, construction activities were performed in different phases. Year-wise details of constructions of various buildings of the institution are as follows:

Buildings in East Campus

Educational Buildings		
Sl.No.	**Name of Building**	**Construction**
1.	Foundation stone (laid on 25/11/1921)	1921
2.	Main Building	1921-26
3.	Workshop	1954
4.	Mechanical Engineering Building	1964
5.	Electrical Engineering Building	1966
6.	Civil Engineering Building	1966
7.	Guest House	1996
8.	Auditorium	1970
9.	Old Canteen	1970
10.	Bank	1970
11.	Hospital	1970
12.	Leather Technology	1978
13.	Computer Science & Engineering	1984
14.	New Mechanical Engineering Building	1995
15.	Library	2007
16.	E-Class Room-1&2	2007
17.	New Class Rooms (From G1 to G7)	2007
18.	New Canteen	2009
Hostel Buildings		
1.	Shridharacharya Hostel (LV Boys Hostel - Old)	1970
2.	Alaknanda Hoste (Girls Hostel-1)	1985
3.	Mandakini Hostel (Girls Hostel-2)	1992
4.	Bhagirathi Hostel (Girls Hostel-4)	1995
5.	Gangotri Hostel (Girls Hostel-3)	2003
6.	Shri Ramanujan Hostel (LV Boys Hostel - new)	2009

Residential Buildings		
1.	Bungalow (07 Nos)	1921-26
2.	Type - 4 Residence (Old soda factory)	1960
3.	Type - 3 Residence (Old soda factory, 02 Nos)	1960
4.	Type - 2 Residence (Old soda factory, 02 Nos)	1960
5.	Type - 4D Residence (Total 04 Nos)	1970
6.	Type - 1 Residence (20 Nos)	1978
7.	Type - 1 Residence (Guest House 02 Nos)	1995

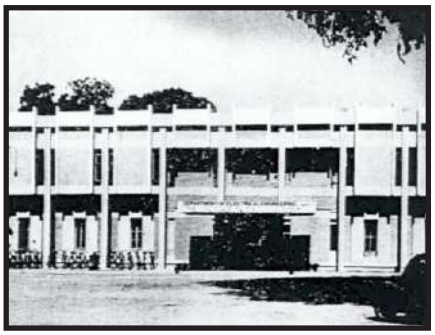
Buildings in West Campus

Hostel Buildings		
Sl.No.	**Name of Building**	**Construction**
1.	Abdul Kalam Hostel (West Campus Hostel-1)	1972
2.	Vishweshwaraya Hostel (West Campus Hostel-2)	1978
3.	Raman Hostel (West Campus Hostel-3)	1987
4.	Ambedkar Hostel (Dr. B.R. Ambedkar Hostel-1)	2012
5.	Aryabhatta Hostel (Dr. B.R. Ambedkar Hostel-2)	2012
Residential Buildings		
1.	Type - 4D residence (24nos)	1971
2.	Type - 4S residence (08nos)	1972
3.	Type - 3 residence (22nos)	1972
4.	Type - 2 residence (32nos)	1972
5.	Type - 1 residence (123nos)	1972
6.	Type - 4T residence (06nos)	2000

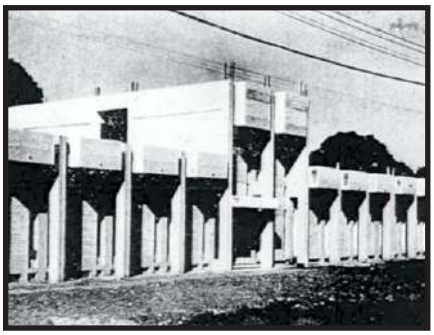
New Constructions

Sl.No.	Name of Buildings	Construction
1.	New Drawing Hall at East Campus	2016
2.	Gymnasium at West Campus	2017
3.	Sports Complex for Girls at East Campus	2018
4.	Vehicle Parking at East Campus	2018
5.	Atal Incubation center at East Campus	2018

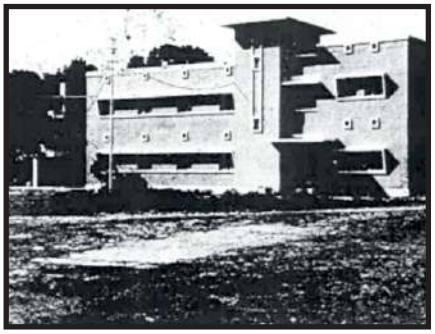
Buildings under construction during
Golden Jubilee Celebration
H.B.T.I., Kanpur 1973



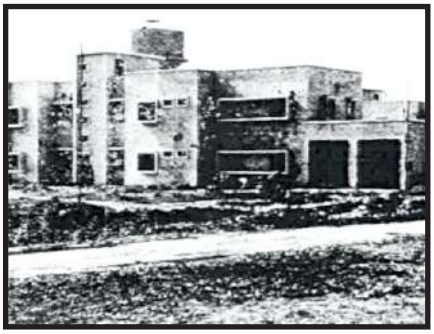
Electrical Engineering department shifted to the new building this session. The inauguration was by Prof M.S. Thacker



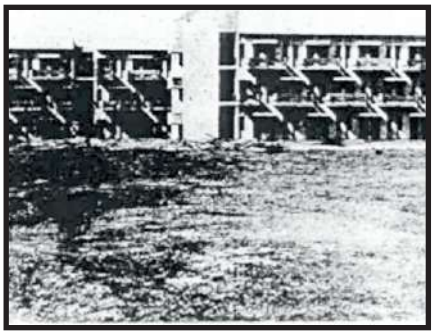
Civil Engineering building is just ready for occupation along with a hydraulic lab (not seen in the photograph).



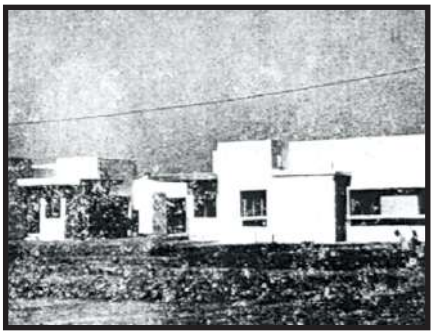
Lake View Hostel, which accommodated 50 students till recently now, has new wing added for 75 residents.



Double Storeyed residences for teaching staff are ready for occupation.

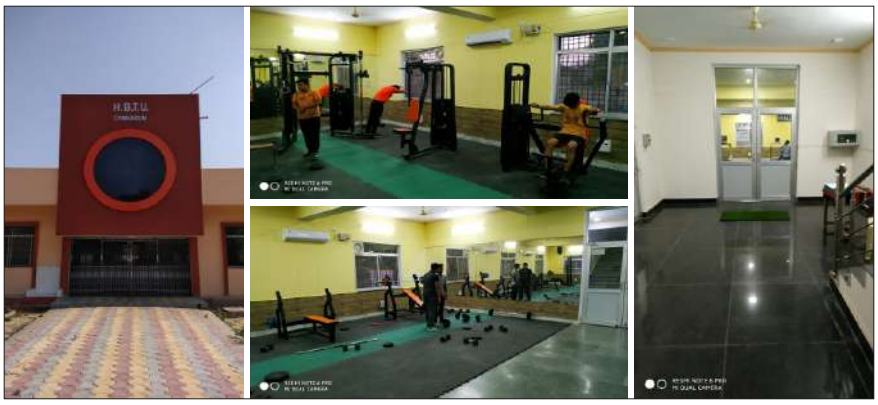


A 180 Seater hostel near completion in the West Campus. The institute presently has one 125 seater hostel of its own and rented hostels for further 200 students



Further residences for the teaching staff are ready for occupation.

6.	Vishwakarma Hostel (West Campus Hostel-4)	2018
7.	Yamuna Hostel (Girls Hostel-5) at East Campus	2019
8.	Lift and Ramp for students with special abilities	2019
9.	Saraswati Hostel (Girls Hostel-6) at East Campus	2021
10.	VC residence and Camp Office at West Campus	2021
11.	Multi-purpose Hall at West Campus	2021
12.	New Auditorium at East Campus	2021
13.	Lecture Hall Complex at East Campus	2021
14.	Shatabdi Stambha at East Campus	2021
15.	Shatabdi Dwar at West Campus	2021
16.	New Chem. Engg. Building at East Campus	2021
17.	New Electronics Engg. Building at East Campus	2021
18.	New Incubation Center at East Campus	2021



विश्वविद्यालय के पश्चिमी प्रांगण में पूर्णतः सुसज्जित जिमनेज़ियम

विश्वविद्यालय के पश्चिमी प्रांगण में निर्माणाधीन १००० सीटर प्रेक्षागार एवं बहु-उद्देश्यीय भवन

विश्वविद्यालय में निर्माणाधीन इलेक्ट्रॉनिक्स अभियंत्रण विभाग

विश्वविद्यालय में निर्माणाधीन
केमिकल अभियांत्रिक विभाग

विश्वविद्यालय में निर्माणाधीन
बहु-आयामी लेक्चर भवन संकुल

विश्वविद्यालय के पूर्वी प्रांगण में संचालित गंगोत्री गर्ल्स छात्रावास

विश्वविद्यालय के पश्चिमी प्रांगण में संचालित ४०० सीटर विश्वकर्मा छात्रावास

विश्वविद्यालय के पूर्वी प्रांगण में उद्भवन हेतु संचालित अटल इनक्यूबेशन केन्द्र

विश्वविद्यालय में निर्माणाधीन इनक्यूबेशन केन्द्र

विश्वविद्यालय में प्रस्तावित प्लेसमेंट केन्द्र

विश्वविद्यालय के पूर्वी प्रांगण में निर्माणाधीन ४०० सीटर प्रेक्षागार एवं क्रियाकलाप केन्द्र

विश्वविद्यालय के पूर्वी प्रांगण में आन्तरिक मार्ग व्यवस्था का सुदृढ़ीकरण एवं अनुरक्षण

3.3 Passouts

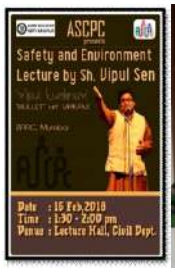
In the year 1924, six students had passed out, who were admitted in the year 1921.Interestingy, no class of diploma was awarded because the grading system was not finalized until year 1925.

As Institution grew older, courses were being added, and also, students intake was gradually increase in the planned phased manner. More buildings were constructed like departments, classrooms, faculty offices, spaces for staff and laboratories. With students intake as six initially, the number swelled upto 938as on2020-21. The course offered by the institute always had a first preference by all UG and PG degree aspirants.

3.4 New Strides

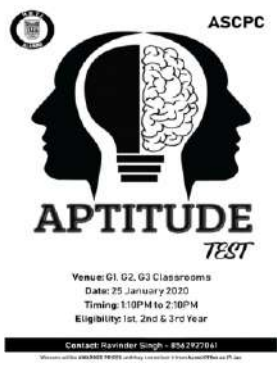
The Institution has taken several new strides as per market forces, changes in socio-economic and social factors, technological factors and others.

एल्युमिनी स्टूडेंट कनेक्ट प्रोग्राम कमेटी (ASCPC)
के तत्वावधान में आयोजित सामाजिक कार्यक्रम एवं विचार मंथन श्रृंखला



सुरक्षा एवं पर्यावरण पर तात्विक उद्बोधन एवं पब्लिक एड्रेस सिस्टम का अनुदान
वरिष्ठ पूर्व छात्र परमाणु वैज्ञानिक श्री विपुल सेन द्वारा 16-2-2018

उद्भवन एवं नवीन उपक्रम स्थापना विषय पर श्री राजीव सिक्का (निदेशक सेन्ट्रल यूपी गैस लि.)
द्वारा विषय प्रवर्तन 20-2-2018



When students are admitted in first year, all the students have to attend a compulsory induction program and an orientation program, as a result students get easily adapted to new culture and life.

To improve efficiency of day-to-day office operations, academics process, and student's welfare

जल्द हर घर में होगा वाटरप्यूरीफायर

पानी को शत् –प्रतिशत शुद्ध बनाने की तीन गुना सस्ती तकनीक

विक्सन सिक्रोडिया कानपुर

पानी को शुद्ध बनाने वाले वाटर प्यूरीफायर अब जल्द ही आम घरों की पहुँच में होंगे भारतीय वैज्ञानिकों ने इसका एक बेहद सस्ता विकल्प ईजाद किया हैं । पेयजल उपलब्धता को बढ़ाने के लिये दुनिया भर में अनेक शोध चल रहे हैं। लेड क्रोमियम, कॉपर, और कैडमियम जैसी अनेक भरी धातुएं, जो पानी को प्रदूषित करती हैं, उन्हें अलग कर पानी को पीने लायक बनाया जा सकता है। इस काम के लिये बाजार में मौजूद फिल्टर और वाटरप्यूरीफायर अपेक्षाकृत मंहगे है। जिस कारण आम आदमी इनका इस्तेमाल नही कर पाता है।

तीन गुना सस्ती तकनीक:

कानपुर स्थित हरकोर्ट बटलर प्राविधिक विश्वविद्यालय में रिसर्च एंड डेवलपमेंट संकाय की डीन प्रो.

रीना सिंघल ने बताया कि संस्थान ने बेहद सस्ती तकनीक को विकसित किया है। मल्टी पॉलीमरिक हाइड्रोजेल नामक तकनीक के जरिए पानी में मिश्रित हानिकारक धातुओं को आसानी से अलग किया जा सकता है । अच्छी बात यह है कि प्रचलिततकनीकों की तुलना में यह तीन गुनी सस्ती है। अभी तक प्रेसीपिटेशन (अक्षेपण) व एक्टिवेटेड चारकोल समेत अन्य

स्वस्थ समाज

विधियों से पानी को शुद्ध किया जाता हैं। लेकिन, इन विधियों के जरिए वाटरप्यूरिफायर बनाने में लागत बहुत आती है । जबकि एक ग्राम हाइड्रोजेल 350 मिलीग्राम धातुओं को तुरंत अवशोषित करने की क्षमता रखता है। प्रो. सिंघल ने जानकारी दी कि यह शोध कार्य अमेरिकी साइंस में प्रकाशित हुआ है। अन्य अंतराष्ट्रीय शोध पत्रों में भी इसे स्थान मिला है।

टिकाऊ भी है : प्रो. सिंघल ने बताया कि पानी से भारी धातुओं व इंडस्ट्रियल डाई को अलग करने वाले एक हाइड्रोजेल का पांच बार इस्तेमाल करके हर बार अशुद्धियों को दूर किया जा सकता है 20 वर्ष से इस क्षेत्र में काम कर रहीं प्रो. सिंघल ने बताया कि भारतीय कंपनियां इस तकनीक में जल्द ही दिलचस्पी लेंगी और जल्द ही सस्ते वाटरप्यूरीफायर आम लोगों के लिये बाजार में उपलब्ध होंगे।

measures implementation and their outputs, automation has been done. Enterprise Resource Planning (ERP) has been brought in place.

Research is the priority of the University. There is a phenominal shift in culture and the thought process after upgradation of HBTI as HBTU. As an Institute, HBTI was more focused on knowledge dissemination. But today, HBTU focus is on knowledge dissemination and knowledge generation through excellent research. Faculty member are actively engaged in various research and development (R&D) projects and publishing world-class research papers. Anti-plagiarism software in University ensures authentic research.

The University has a green campus. Extra efforts are being made to protect the green belt in the campuses.

Incubation

काजू के छिलके से बनाया प्लास्टिक का विकल्प

विक्सन सिस्रोडिया कानपुर

पर्यावरण संरक्षण के लिये प्लास्टिक पर काबू पाना समय की मांग बन चुका है कानपुर के वैज्ञानिक ने काजू के छिलके से प्लास्टिक का बेहतर विकल्प बनाने में सफलता पाई है यह पदार्थ प्लास्टिक की तुलना में टिकाऊ, सस्ता और पर्यावरण संरक्षण में मददगार होगा । इसे री –साइकल भी किया जा सकता है।

आने वाले समय में काजू के छिलके से बने इस पदार्थ से हेलमेट, कुर्सी, जैसे सामान के अलावा कूलर व फ्रिज की बॉडी जैसे बड़े सामान भी बनाये जा सकेंगे । हरकोर्ट बटलर प्राविधिक विश्वविद्यालय (एचबीटीयू) में प्लास्टिक विभाग के विभागाध्यक्ष प्रो. दीपक श्रीवास्तव ने लंबे शोध के बाद यह पदार्थ तैयार किया जाता है। फिलहाल ग्लास फाइबर व फिनॉल नामक रसायन से प्लास्टिक बनाई

जाती है फिनॉल पर्यावरण को बहुत अधिक नुकसान पहुँचाता है प्रो. श्रीवास्तव ने काजू के छिलकों से फिनॉल का प्राकृतिक विकल्प विकसित किया है वह बताते हैं कि काजू के छिलके में 80 प्रतिशत तेल होता है

जिसके इस्तेमाल द्वारा यह मजबूत

सस्ता और इकोफ्रेंडली भी होगा

फिनॉल का बेहतर विकल्प कॉर्डनाल काजू के छिलके से प्लास्टिक का विकल्प तलाशने के लिये प्रो. दीपक श्रीवास्तव ने यह शोध पांच साल पहले शुरू की थी । इसके लिये उन्होंने हैदराबाद से काजू पेस्ट मंगवाया था । काजू के छिलकों में पाया जाने वाला तेल उनकी शोध का आधार था। जिसकी रासायनिक संरचना का डिजिटल अध्ययन कर उन्होंने फिनॉल का विकल्प कॉर्डनॉल तलाशा । जिससे हार्ड मैटिरियल बनाया गया

स्वस्थ समाज

पदार्थ बनाया गया है प्रो. दीपक ने बताया कि यह इतना मजबूत है कि इससे बड़े और भारी सामान भी बनाये जा सकेंगे एचबीटीयू प्रयोगशाला में इसका सफल परीक्षण किया जा चुका है प्रो. दीपक अब इसे पेटेंट कराने जा रहे हैं

प्लास्टिक से 20 फीसद सस्ता

प्रो० दीपक ने बताया कि प्लास्टिक की जगह इस्तेमाल किया जाने वाला थर्मो सेट मटीरियल प्लास्टिक की तुलना में करीब 20 फीसद तक सस्ता होगा । इसकी मौजूद थर्मोप्लास्टिक को रीसाइकिल भी किया जा सकता है ।

हल्के भूरे रंग का : प्रो. श्रीवास्तव ने बताया कि जिस मैटीरियल को उन्होने बनाया है वह हल्के भूरे रंग का है। इसका इस्तेमाल उत्पादों के अतिरिक्त ढ़ाँचे को तैयार करने में किया जा सकता है जबकि बाहरी ढाँचा बनाने के लिये पारदर्शी प्लास्टिक की जरुरत होती है । इस पदार्थ को पारदर्शी बनाने के लिये इसे एक और प्रक्रिया से गुजरना पड़ता है।

भूजल के बढते प्रदूषण से निजात की मिली नई राह

जागरण विशेष

विक्सन सिस्रोडिया कानपुर

भूजल के बढ़ते प्रदूषण से निजात की एक नई राह मिलती नजर आ रही है । कानपुर में हरकोर्ट बटलर प्राविधिक विश्वविद्यालय(एचबीटीयू) के छात्रों ने सूखकर गिर जाने वाली पत्तियों से ऐक्टिवेटेड कार्बन ' बनाने का फार्मूला तैयार किया है। जो दूषित पानी को पीने योग्य बनाने का काम करेगा । इसमें पीपल, आम, बबूल, की छाल और पत्तियां फिल्टर का काम करेंगी । इस शोध की विशेषता यह है कि केमिकल से बनने के कारण यह एक्टिवेटेड कार्बन सस्ता भी होगा ।

केमिकल इंजीनियरिंग के विभागाध्यक्ष प्रो. एस.के. गुप्ता के निर्देशन में एमटेक व पीएचडी के छात्रों ने पत्तियों ,छाल, जड़ को

हरकोर्ट बटलर प्राविधिक विश्वविद्यालय(एचबीटीयू)

कैप्स में गिरने वाले पत्तों को देखकर आया आइडिया

एचबीटीयू कैंपस में काफी संख्या में पेड़ है । उनके पत्ते लगातार गिरते रहते है एमटेक के छात्रों ने इन पत्तों के इस्तेमाल से एक्टिवेटेड कार्बन बनाने पर शोध का प्रोजेक्ट तैयार किया प्रो. एस. के. गुप्ता के निर्देशन में पूरा किया गया।

आक्सीजन की अनुपस्थिति में एक निश्चित तापमान में फर्नेस में गरम करने के बाद एक्टिवेटेड कार्बन प्राप्त किया है।यह कार्बन लेटर इंडस्ट्री के पानी में घुले फ्लोराइड व कपड़ों की इंडस्ट्री से निकलने वाले पानी में घुले आर्सेनिक को अलग करने की क्षमता रखता है। चूंकि इंडस्ट्री के पानी को भी इससे ट्रीट करके पीने के योग्यबनाया जा सकेगा । छात्रों की टीम ने ग्राउण्ड वाटर में फ्लोराइड छानने के उपदेश से यह शोध कार्य शुरू किया था।

उन्नाव के ग्राउण्ड वाटर पर प्रयोग सफल रहा : प्रो एस. के गुप्ता ने बताया कि उन्नाव के ग्राउण्ड वाटर में फ्लोराइड की मात्रा बहुत अधिक है टीम ने सबसे पहले यहां फ्लोराइड छानने के लिये नीम, पीपल, आम व बबूल के पत्तों से आक्सीजन की अनुपस्थिति में अलग–अलग तापमान में रासायनिक अभिक्रिया से एक्टिवेटेड कार्बन प्राप्त किया इसका प्रयोग एचबीटीयू की केमिकल इंजीनियरिंग की लैब में ग्राउण्ड वाटर से फ्लोराइड को अलग करने में किया गया । जो सफल रहा । प्रो. गुप्ता ने बताया कि एक्टिवेटेड कार्बन को पत्तियों व छाल से काफी कम मूल्य में प्राप्त किया जा सकता है।

वेस्ट मैनेजमेंट के साथ सस्ता विकल्प फिल्टर :– पाइड में सूखकर गिरने वाली पत्तियां,छाल , व सूखी जड़ो के वेस्ट मैनेजमेंट का यह अच्छा तरीका है वेस्ट मैनेजमेंट के साथ इससे बनने वाला एक्टिवेटेड कार्बन ग्रामीणों के लिये सस्ता फिल्टर भी साबित हो सकता है केमिकल फिल्टर की अपेक्षा 30 फीसद कम कीमत पर इसे तैयार किया जा सकता है।

मट्ठा सुखाकर बनेगी ब्रेड, बिस्किट और पेंट

यह थोड़ा चौंकाता है, लेकिन है सोलह आने सच। मट्ठे को सुखाकर उससे ब्रेड,

बिस्कुट व केक जैसे खाद्य पदार्थों के अलावा पेण्ट को टिकाऊ बनाने का फार्मूला हरकोर्ट बटलर प्राविधिक विश्वविद्यालय (एच.बी.टी.यू.) प्रोफेसर व रिसर्च स्कॉलर ने तलाश लिया है। फूड टेक्नोलॉजी में असिस्टेंट प्रोफेसर डा० विवेक कुमार ने निर्देशन में डेढ़ साल शोध के बाद एम.टेक. छात्राओं दीपशिखा व अंजली श्रीवास्तव की टीम ने मट्ठे के पाउडर में प्रोटीन की मात्रा बढ़ाने व फैट कम करने में सफलता प्राप्त की है। रासायनिक व भौतिकी परीक्षणों के बाद इसे खाद्य पदार्थों की गुणवत्ता बढ़ाने के लिये बेहतरीन पाया गया। पेण्ट के एडीशन (चिपकाने की क्षमता) के रूप में यह काम कट सकता है। इसके लिये अभी तक मिल्क प्रोटीन केसीन का इस्तेमाल किया जाता है। इसकी कीमत करीब 2501 रूपये किलो है। जिस सूखे मट्ठे की गुणवत्ता बढ़ाकर उसे एडहिशन के लिये तैयार किया गया है उसकी कीमत 100 रूपये किलो आयेगी। डा० विवेक ने बताया कि इसका इस्तेमाल पेंट में चिपकानेकी गुणवत्ता बढ़ाने के अलावा चमड़े की फिनिशिंग व माचिस की तीली के आगे लगने वाले मसाले को बनाने में किया जाता है। ग्रामीण महिलाओं को मिलेगा रोजगार : डा० विवेक ने बताया कि उरई मुरैना, जालौन व भिण्ड के अलावा बुन्देलखण्ड के अन्य क्षेत्रों में मट्ठा अत्यधिक के मात्रा में होता है। 50 से 60 रूपये किलो के दाम पर महिलाये मट्ठे को सुखाकर बेचती हैं। खाद्य पदार्थों से लेकर पेंट, लेदर व माचिस इण्डस्ट्री में सूखे मट्ठे की खपत होने के बाद इसकी बढ़ेगी, जिससे उनका रोजगार भी बढ़ेगा। सूखे मट्ठे में फैट अधिक व प्रोटीन कम रहता है मट्ठे को छानकर जब सुखाते हैं तो उसमें फैट 20 से 25 फीसद व प्रोटीन 30 से 35 फीसद होता है। पेंट इंडस्ट्री की जरूरत अधिक प्रोटीन व कम फैट वाले मट्ठे का पाउडर था। डा० विवेक सचान ने विश्वविद्यालय की लैब में परीक्षण करने के बाद फैट को घटाकर तीन से चार फीसद कर दिया जबकि प्रोटीन बढ़कर 65 से 70 फीसद तक पहुँच गया। डा० विवेक बताते हैं कि खाद्य पदार्थों के निर्माण में जल्द इसका लाभ मिलेगा।

Centre of University promotes the spirit of innovation and incubation among the students. The Entrepreneurship Cell makes continuous efforts to develop entrepreneurship skills in the students. Various expert lectures from industry experts are being organized on continuous basis.

Other strides by the institution are creation of a state-of-the-art Gymnasium, a multi-purpose hall, a helipad and Mahila Adhyayan Kendra. University has adopted several villages in order to fulfil its social commitment. Several energy conservation measures have been taken. Other events/activities includes organisation of blood donation camp, health checkup camps, vaccination drive, health awareness seminars, community kitchen (Janta Rasoi). Welfare funds have also been created. Relief material is being sent in the time of dire need/disaster.

4

PASSING THE TORCH

The Harcourt Butler Technological Institute (HBTI) owes its origin to the Industrial Conference at Nainital in Year 1907, which proposed the establishment of two technical institutions in Uttar Pradesh, one at Roorkee for engineering, and one in Kanpur, for industrial chemistry.

As a result a three years postgraduate diploma course in chemical research and in oils after B.Sc. was started in Year 1921 under the guidance of Dr. E.R. Watson as its first Principal. This was followed by the opening of a Leather Technology Wing in Year 1922 and Sugar Technology Wing in Year 1928, both of which later on became full independent institutes separate from H.B.T.I. During 1932-47 short term courses on Sugar technology and Oil technology as well as in essential oils were started with concurrent relocation of the Glass Technology department of Uttar Pradesh government in its premises.

After the independence of India, at the initiative of the late Shri Gobind Ballabh Pant, then Chief Minister of the state, a reorganization committee headed by Dr. J.C.Ghosh was set up in 1952. The committee suggested reorganization of HBTI into a University College of Technology with the addition of four sections Chemical Engineering, Food and Drug Technology, Applied Microbiology and Dye-stuff Technology, with the National Sugar Institute, the Government Central Textile and the Government Leather Institute as integral parts. Only a part of these recommendations was later on implemented by the Government of Uttar Pradesh by starting a two year course of Chemical Engineering in Year 1954 and a postgraduate course of Applied Microbiology in Year 1956. In the meantime, the U.P. Government shifted its Alcohol Technology Department to HBTI premises.

The All India Council for Technical Education (AICTE) after a careful review, suggested reorganization of teaching in Year 1955 and introduction of new postgraduate courses in certain subjects in Year 1958. At this stage, HBTI was affiliated to Agra University and degrees of B.Sc. and M.Sc. were awarded to its students. This was the first step towards evolving HBTI as a Technical University. The affiliation was transferred to Kanpur University in Year 1967.

In the period 1962-69, this was transformed into an Institute for the higher engineering and technological education in various fields, with research as an essential ingredient. It was this period, when the institute underwent a revolutionary change to acquire the characteristics of a completely new multi-department technological institution. In addition to

this, completely independent and complementary departments of Physics, Chemistry, Mathematics, Life Sciences and Humanities were also established.

On the recommendations of the AICTE in December 1967, the Government of India released a grant of the order of 3 crores for the non-recurring and recurring expenditures for duration of five years. In this process of transformation, was also involved, the historic and far reaching decision of passing on the control of HBTI from the Government of U.P. to an autonomous society having a Board of Governors. This Board was initially headed by the Chief Minister of U.P., but after that by the Minister of Technical Education.

HBTI has the distinction of running the first formal course in Biochemical Engineering in India. It also became the first in India to introduce the new course of Chemical Engineering Practice School at the postgraduate level. HBTI was also the first institution in Uttar Pradesh to start courses in Plastic Technology and Food Technology.

In the session 1972–73, HBTI got completed buildings for Electrical Engineering Department, Civil Engineering Department, Cafeteria, one 75 seater and one 180 seater hostel, residential quarters for over 100 employees at all levels and renovations of the entire campus. An institute dispensary with a full-time doctor was also provided this year. In general, the institute was taking rapid steps to fulfill commitments of the fourth Five Year Plan by July 1973, towards the following:-

1. Completion of institutional buildings

2. Completion of residential and hostel buildings

3. Creation of various students amenities

During the fifth Five Year Plan, the institute once again planned to launch some very significant schemes for greater contributions to the nation. These include the following:-

1. Addition of postgraduate programme in Electrical Engineering, Mechanical Engineering and Civil Engineering.

2. Opening of a postgraduate course in Petroleum Engineering

3. Opening of PG courses in Applied Physics, Applied Chemistry and Applied Mathematics, with emphasis on technological approaches.

4. Addition of the following new disciplines at the undergraduate level -

a. Pharmacy; b. Rubber technology

4.1 HBTI and Its Fifty Years

With a strong ambition and high objective to provoke the urge of entrepreneurship in the public, to accelerate the current industrial development, to create a healthy and sound environment for new applied researchers and above all to produce manpower of true technical and scientific outlook, an institute was started in Year 1920 and was named as "Government Research Institute, Cawnpore".

4.1.1 Initial Stages

Initially, the above government Research Institute was started in two rooms of 'SHERWALI KOTHI', still present at the northwest corner of the Company Bagh crossing, Nawabganj, Kanpur in conjunction with Government Opium Research Laboratory. Dr. E. R. Watson of Decca University was appointed the first Principal and Research Chemist.

In the year 1921, after a lot of controversy in the U.P. assembly during the industrial ministership of Shri C.Y. Chintamani, who strongly suggested the opening of such an institute, it began teaching also. In the same year, Govt. Research Institute was renamed as Govt. Technological Institute, United Provinces, Cawnpore. In year 1921, it was decided to take three students for training in Applied Chemical Research and three in Oil Technology and Chemistry. Thus, this institute was started with six students. But,this first batch was asked to join at the Govt. Technical Institute Lucknow for the preliminary training in Mechanical Engineering for a period of six months. The main reason behind this was lack of proper infrastructure at Kanpur at that time. Since, there was no hostel accommodation for the students, the students of the first batch after returning from Lucknow, and the second batch were made to stay in a bunglow of some Nawab in a created compound for two years.

4.1.2 The New Building – The New Name

On 25 Nov. 1921, the foundation stone of the present building was laid down by Sir Spencer Harcourt Butler K.C.S.I., C.I.E., the then Governor of United Provinces. By year 1925, the North Wing was completed, and in the back of the Central Hall a temporary hostel with a tile roof and brick floor was constructed. The present Workshop building was constructed in year 1954.

The name of the Govt. Technological Institute, United Provinces, Cawnpore was changed to Harcourt Butler Technological Institute under the Presidentship of the Nawab of Chhattari, then Industry Minister of United Provinces, and in the absence of Sir Butler, the ceremony of giving the new name of Harcourt Butler Technological Institute was performed. This Govt. Research Institute of year 1920, and Govt. Technological Institute of year

Principals and Directors
H.B.T.I., Kanpur
Period 1921-1973

DR E.R. Watson
1921 - 1926

DR G.J. Fowler
1926 - 1928

DR H.D.H. Drain
1929 - 1932

DR J.A.H. Duke
1932 - 1937

Sri D.Y. Athawale
1937 - 1947

Sri D.R. Dhingra
1947 - 1957

Dr. H. Trivedi
1957 - 1962

Dr. C.R. Mitra
1962 - 1969

Prof. R.S. Chaturvedi
1969 - 1971

1921 became in year 1926 the Harcourt Butler Technological Institute.

4.1.3 The Chequered Early History

In the beginning a three year diploma course was started in two sections: Chemical Research and Oil Chemistry and Technology for B.Sc. students. Students of Oil Technology were sent to the local industries for training. For Applied Research, the students were sent to workshops in and around city of Kanpur.

In the year 1922-23, a section of Leather Chemistry and Technology was started. In 1925, Dr. E.R. Watson went back to England where he later committed suicide, and Dr. Gilbert J. Fowler took over as the new Principal.

In year 1923, the post of Principal abolished and the Director of Industries, U.P. was appointed as the ex-officio Principal. The period of training for B.Sc was reduced from 3 years to 2 years at the end of which an associate diploma (A.H.B.T.I) was awarded. Another two years course after diploma was started at the end of which a Fellowship (F.H.B.T.I) was awarded.

In year 1933, the Leather Section was abolished after the opening of a separate institute. Around this time Nagrath Paint Works, Pioneer Glue Works were a few organisations for which research work was done in HBTI.

4.1.4 Start of the New Era

The year 1964, which changed the shape of the institute, shall always be remembered in the history of HBTU. The major changes may be listed as follows:

The U.P Cabinet in the regime of Mrs. Sucheta Kriplani declared it as fully autonomous institute, governed by the Board of Governors with the Chief Minister or his nominee as Chairman.The staff structure was reconstituted to match that of a teaching institution.The Post of Principal was raised to that of a Director. Seven new undergraduate courses were started viz. Electrical Engineering, Mechanical Engineering, Biochemical Engineering, Plastic Technology, Food Technology, Oil Technology and Paint Technology.

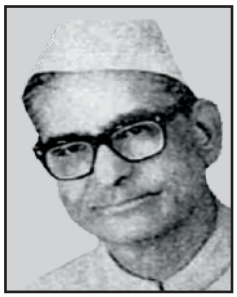
There was an offer of collaboration from the Stevens Institute of Technology(U.S.A.) and the Council of Scientific and Industrial Research (India).

In year 1965, the institute was declared autonomous and Dr.C.R. Mitra was appointed as its first Director. In the same year postgraduate courses in Biochemical Engineering, Food Technology, Oil Technology, Paint Technology, and Plastic Technology were also started. First in India, a Postgraduate Course in Chemical Engineering practice was also started in

Board of Governors H.B.T.I., Kanpur 1973

Dr Ramjilal Sahayak
Chairman

Dr S.D. Shukla
Director



Sri Bhakt Darshan

Sri G.D. Bajpai

Sri P.N. Srivastav
Vice-Chairman

Sri S. Sadashivam

Sri S.K. Goel

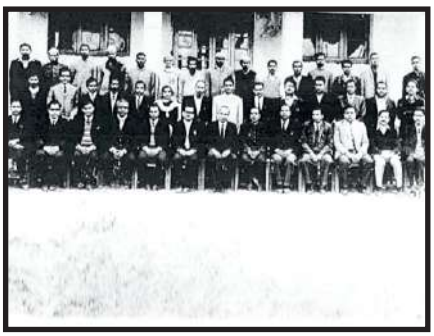
Sri P.N. Chaturvedi

Dr Jai Krishna

Dr S.S. Saluja

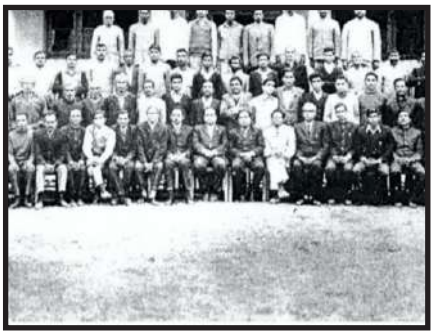
Dr M.S. Muthana

Members of Staff and Research Scholars of the Engineering Departments Chemical, Civil, Electrical & Mechanical

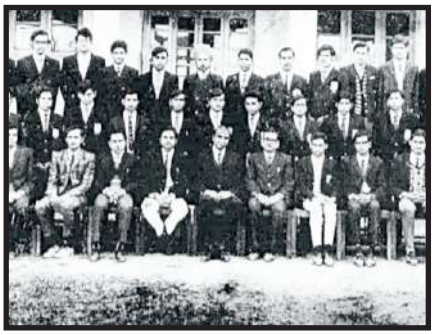


Members of Staff and Research Scholars in Departments of Basic Sciences (Chemistry, Mathematics & Physics) and Humanities

Members of Staff and Research Scholars in Technology Departments (Biochemical, Food, Oils, Paints and Plastics), Industrial Research Wing and ICAR Scheme.



Members of Staff of the Institute Workshop. Construction Division and Maintenance Section.



The Class Representatives, 1972 - 1973

The Council of Students Activities, 1972 - 1973

this year. In this year, all the teaching posts were also declared permanent.

In year 1966, the Undergraduate Course in Civil Engineering was started. In year 1967 the first Seminar on "Biochemical Engineering Training and Research" in India was held at HBTI.

4.2 Admission of Students

In the beginning, admission of the students was done after an interview committee consisting of Industrial Chemists of U.P. and the Principal of the Institute. Both, Biology and Mathematics students were eligible for admission. Presently admissions are done on the basis of rank obtained in Joint Entrance Examinations (JEE) Mains only.A few seats are reserved as per Government Policies.

4.3 Scholarships but No Fees

Initially, each student was given a scholarship of Rs. 75 per month in year 1921 and was charged no institution fee and no hostel fees. After B.Sc., people were not able to get service of more than Rs. 40 to 50 per month in those days, but the student of HBTI were given Rs. 75 per annum besides this on completion of the course, They were sure to get a service of at least Rs. 300 per month. After 100 years, and still the scholarships are awarded to 25% of the students of the courses.

4.4 A Peaceful Institute

According to Dr. D. R. Dhingra (once Director), Shri H. S. Chaturvedi (the oldest student) stated that HBTI was the most peaceful institute. Even in the National Movement of year 1942, the students participated in a very dignified and peaceful manner.

But this peace was broken in year 1968, when first of all, the students observed a one day token strike in support of All India Engineers strike against unemployment. And from year 1968 till year 1971 almost every year there were strikes and it is a matter of great sorrow to mention that both in year 1970 and year 1971, the institute, which was honored for its discipline, was closed for nearly 15 days.

4.4.1 Ragging

According to some old students of H.B.T.I, the incidents of ragging started in year 1965. Before year 1965 there was no activity like ragging. In the words of Shri T. R. Sharma, a student of year 1939, "every admitted student was treated very gently and after some time, when he became more familiar, we used to make fun of him only verbally".

4.4.2 The First Girl Students

First girl students admitted to HBTI were Miss Pratibha Limaye and Miss Neela Patwardhan, who took admission in year 1966 in Civil

Engineering and Chemical Engineering, respectively.

4.5 IIT in HBTI

It is a matter of pride that among the several offices and institutes nurtured on HBTI campus, includes prominent institutes like IIT Kanpur. It started in HBTI in 1958 and stayed for two sessions before coming in its present form.The assistance and cooperation given by HBTI is still cherished by the older staff of IIT Kanpur.

Knowledge is the hill, which few may wish to climb; Duty is the path that all may tread. **- Lewis Morris**

4.6 First Convocation as Institute

The first ever convocation ceremony of HBTI took place on 12th February, 1984. The ceremony was honored by the then Planning Minister at that time Mr. Narendra Singh as the Chief Guest. The ceremony started by lamp lighting done by the then Honorable Vice Chancellor and the Chief Guest, and after that, the entire hall was resonating by the enchantments of " Vande Mataram ". The first batch to get called for the distribution of graduate degrees was of Chemical Engineering, it was a batch of 33 boys. Later on, the students of Civil Engineering, Electrical Engineering, Mechanical Engineering, Leather Technology, Biochemical Engineering, Food Technology, Oil Technology, Paint Technology, Plastic Technology were also provided with their degrees in alphabetical order. The following were the Gold Medalist of the 1984 batch.

Mr. Sharad Kumar Gupta, Civil Engineering

Mr. Devesh Kumar, Paint Technology

Mr. Umesh Chandra Vajpayee, Chemical Engineering

Mr. Anand Mohan Rastogi, Leather Technology

Mr. Sushil Kumar Srivastava, Plastic Technology

Mr. Sharad Kumar Gupta, Civil Engineering

Ms. Indra Gupta, Electrical Engineering

4.7 First Convocation as a University

In the year 2016, HBTI became a University and thus to be known as HBTU. The first ever convocation ceremony of HBTU took place on 7th December, 2019. The ceremony was honoured by the presence of Prof. Sanjay Govind Dhande as the Chief Guest. He was Director of the Indian Institute Of Technology, Kanpur. This convocation ceremony took place in the East Campus of HBTU. Students of M. Tech and MCA were provided degrees in this convocation ceremony.

The following were the Gold Medallists of this Convocation:

Ms. Gaitry Arora (M.Tech in Computer Aided Design)

Ms. Neha Sinha (M.Tech in Oil Technology)

Mr. Himanshu Gupta (M.C.A)

The following were the Silver Medalists of this Convocation:-

Mr. Pranjal Kumar (M.Tech in Computer Aided Design)

Ms. Shikha Tripathi (M.Tech in Computer Aided Design)

Mr. Shreya Sinha (M.Tech in Food Technology)

Mr. Prakhar Mishra (M.C.A)

SEMINAR'S ** MOTIVATIONAL TALKS ** QUIZ ** TECHNICAL EVENTS

NEW AVENUES OF COOPERATION WITH THE HBTU ALUMNI SPREAD ALL OVER THE WORLD

SEMINAR

Startup Talk
By Mr. Rajiv Sikka

DATE : 20 FEB,2018
TIME : 4:00 PM
VENUE : AUDITORIUM

उत्तर प्रदेश के यशस्वी मुख्य मंत्री योगी आदित्यनाथ जी की गरिमामयी उपस्थित में एच.बी.टी.यू. में क्रियान्वित होने वाले विकास कार्य के स्मृति पत्रों पर हस्ताक्षर दिनांक 27-01-2018

PROMINENT ACHIEVEMENTS

- With the growing need of digitalization, Harcourt Butler Technical University became one of the first institutions in the state to provide wi-fi facility to students both in campus and hostels.
- The smart classes in the university prove to be an asset for the students as well as the educators to enhance the efficiency of lectures.
- The university was ranked #1 for 3 consecutive years (2011-2013) by the ABP news portal.
- The university defeated most of the Engineering colleges in India and won the Smart India Hackathon 2019, and also secured the runner-up position in the same event.
- NIRF ranking of 166th in the year 2020 owing to the given condition of pandemic was a commendable Ranking.
- MDRA (India Today) Ranking of the University in the year 2020-21 was of 20th, the career best.
- With 100+ theses done on various domains within a span of 20 years (2000-2020) is in itself a great pride for the university which intends to expand the domain of research in coming years.
- 15000 per month stipend for th
  broaden the scope of research in t
- Mr. G.M. Desai, a diligent studer
  the university proud when he re
  Ranji Trophy tournament in 1972
- Mr. Satish Chandra and Mr. C
  Kanpur University Tennis & Cric
- T.T. and Lawn Tennis team R
  Collegiate Championship in 197

- Institute Gymnastics team was declared Winner in Kanpur University Inter Collegiate Championship in year 1974-75.
- Institute Gymnastics & Malkhamb team was declared Runner-up in Kanpur University Inter Collegiate Championship in year 1975-76.
- Mr. L.K. Singh has been declared individual Champion in Kanpur University Gymnastic Championship in the year 1977-78.
- Shri K. Venkatraman & K. Praveen Kumar represent at Kanpur University Cricket Team in 1977-78.
- Shri S Ramanan represented U.P. State Basketball Team in National Championship held at Bangalore in 1976-77.
- Institute Table-Tennis team was declared Runner-up in Kanpur University T.T. Championship in 1976-77.
- Institute Gymnastics team was declared Joint Winner in Kanpur University Collegiate Championship in 1979-80.
- Mr. Ravindra Yadav represented Kanpur University Volleyball team in North Zone Inter University Championship in1980-81.
- Mr. Prem Singh represented Kanpur University Athletics team in All India Inter

University Athletic Championship in 1980-81.

- Institute Gymnastics team was declared Runner-up in Kanpur University Collegiate Championshipin 1980-81.
- Mr. Gurumohan Singh Chaddha of Oil Technology was selected for the coaching camp of Indian Rowing team for ASIAD-1982 as well as for Kanpur University Hockey Team in 1981-82.

- Mr. Prem Singh of E.E. was set a new record in Polevault of Kanpur University & has been selected to represent the University Athletic & Gymnasium Teamin 1981-82.
- Mr. Ajay Kumar Tripathi ofME was captain of the Kanpur University Tennis Team in North Zone Interversity Championship in 1981-82.

- Mr. T. Ravindra Kumar, Mr. N. K. Singh & Mr. Jayant Kumar Panda were selected to represent Kanpur University Football team in 1981-82.
- Mr. A. Gabriel was selected to represent Kanpur University Football & Basketball team in 1981-82.
- Mr. Sanjay Lakhotiya, Pravin Yadav & Sharad Saxena represented Kanpur University Tennis team in 1981-82.

- Mr. A. K. Shukla of Food Tech.was selected to represent Kanpur University Weight Lifting & Best Physique team. Besides, Mr. Shukla secured IInd place in District Weight Lifting Championship in 1981-82.
- Mr. H. S. Shukla, N. S. Bisht & V. K. Joshi were selected to represent the Kanpur University Gymnastic team in 1981-82.

- Mr. M.P. Singh & N. S. Prasad wereselected to represent the Kanpur University Malkhamb team in 1981-82.
- Mr. Ravindra Kumar Yadav of Food Tech. secured IIIrdplace in Kanpur District 10 Km. Walk Competition in 1981-82.
- Mr. A. K. Sharma & R. K. Sharma have secured 2nd& 3rd place, respectively in Kanpur University Weight Lifting Championship in 1981-82.
- HBTI Cricket team was winner in national level sports meet "SANGRAM-2009" organised at, IIT Roorkee.
- In long jump and triple jump Mr. Ravi Kumar of Plastic Tech. HBTI won gold medal and in discus Mr. Chandan Singh a student of III B.Tech won bronze medal in national level sports meet "SANGRAM-2009" organised at, IIT Roorkee.
- HBTI Cricket team was winner in state level sports meet "TVARAN-2009", winner in Table-Tennis, Carom & Chess, Girls Singles Badminton and runner-up TVARAN 2009, organised by KNIT Sultanpur.
- HBTI organised "FLICK-10" and an All India Inter Technical College Cricket Tournament (Day/Night) in the year 2010, and HBTI Cricket team won this tournament.
- HBTI Cricket Team reached up to Semi-Final in District level Cricket Tournament organised by "Kanpur Cricket Association" in 2010.
- In UPTU Sports Meet "TVARAN-2011" HBTI Cricket Team became winner.In Table Tennis, team was runner-up, in Chess Team winner, in Carrom HBTI Team was winner. Individual player won Gold, Silver and Bronze medal.
- In College,"HUNK" Cricket Championship (open Intercollegiate Cricket Tournament) organised by "HERO HONDA", HBTI Cricket Team secured runner-up position in 2011.
- HBTI Cricket Team won Kanpur Cricket League Championship (Open Tournament) organised by "Kanpur Cricket Association" 2011.
- In "FLICK-2011" an Inter Technical College State Level Tournament (Day/Night) HBTI team had secured first position in the year 2011.
- Mr. Harshvardhan Singh of HBTI secured runner-up position in District Level Table Tennis Tournament organised by District Table Tennis Association in 2012.
- Ms. Aprna Bhatt of 2nd CS participated in National Level Taekwondo Championship from U.P. State in 2012.

- HBTI Cricket Team secured runner-up position in Kanpur Cricket League Tournament (Open Category) organised by "Kanpur Nagar Cricket Association" in 2015.
- HBTI Football Team reached up to Semi-Final in District Level Football tournament organised by District Football Association in 2015.
- HBTI Football team reached up to Semi-Final in District Level Football Tournament organised by District Football Association in 2013.
- HBTI Cricket Team reached up to Semi-Final in District Level Cricket tournament organised by "Kanpur Cricket Association" in the year-2013.
- International Level Sports Meet "DESPORTIVOS-16" organised by LNMIIT JAIPUR, HBTI Secured First Position in Cricket.
- National Level Sports Meet "PRABHANJAN-17" organised by BIET, JHANSI, HBTU Secured First Position in Table Tennis, Badminton, Basket Ball and second place in 4x100 mtr relay race.
- Apart from all these events, Harcourtians have been shining brightly in various different events such as: Akhil Sachan & Ayush Singh-Winners, Tata Crucibles Campus Edition (IIM Lucknow) 2019.Akhil Sachan & Shambhavi Gupta-Semi Finalists, First Edition of SBI Numero-Uno Quiz 2019.
- Priyanshu Srivastava & Swarn Srivastava, National Finalists& Zonal Winner, Chimera-X National Quiz, ISTE MANIT Bhopal. 2021
- Swarn Srivastava, National Winner, Wipro Earthian National Quiz, 2021.
- University Drama Team won 3rd position in Varchasva (IIM LUCKNOW).
- While producing numerous IAS and IES officers for the nation, HBTI keeps working for the betterment of the nation and society as a whole.
- Harcourtians have been cracking most of the PG exams like GATE and CAT with the highest scores among all the colleges in the state with success ratio of about 80%.
- Providing assistance to the Government of Uttar Pradesh in the clean Ganga Campaign, HBTI had yet again proved how valuable asset it is for the State and the Country.

Our University Faculty Dr. Sunil Kumar,Professor, Civil Engineering Departmentis providing his valuable assistance in the construction of "RAM JANM BHUMI" in Ayodhya is yet again a great achievement for our University as a whole.

6
SHIFT OF CULTURE - STUDENTS LIFE

काक चेष्टा, बको ध्यानं, स्वान निद्रा तथैव च।

अल्पहारी, गृहत्यागी, विद्यार्थी पंच लक्षणं।।

As a plant grows from a seed into a giant tree bearing flowers, fruits and shade for everyone, so does an institute has its students turning into prosperous alumni and brightening institute's glory. Harcourt Butler Technical University always had a good environment, esteemed faculty and study-friendly infrastructure to promote research work and academic excellence.

“Some relations aren't blood relations, but they're ones you live with your soul.” Students have a similar relationship with HBTU teachers and their batchmates, all of them have a profound impact on their heart and soul.

The first time when a student stands in HBTU auditorium for counselling, it fills him with a sense of happiness and pride. The campus seems familiar to him and the classroom experience is really amazing. Hanging out in the cafeteria, working on the lathe machine in the workshop, copying sheets of engineering drawing and mischief during the Mathematics class are incidents that never fade from students' memories.

For some students, the academic path at HBTU becomes challenging- they struggle for attendance, practical files, assignments, homesickness and adjusting to a new environment. But this is what helps them to tackle real life problems and future hardships in a stress-free way because they've already been through a lot and know how to find a solution to anything put forward. Students also recall the nervousness they have during the individual seminar presentations in the final year. Though it seems to be a burden earlier but later appreciate how important it was for boosting their confidence and all-round development.

First year of almost every student used to be and still is a roller coaster ride, settling in the college atmosphere, hostel, and their food. At that time the student had to decide their major branch in the second year. This was also a conflict in the student's life. HBTU environment gives perspective, work ethics, and an education that help students professionally throughout their life. The friendships that one gains at HBTU also impact students profoundly.

Some of our notable alumni from 1995 batch have shared their

invaluable experiences as follows-

"The college experience in student's life is very fundamental and invaluable. The most difficult milestone in a student's life is working their first job, having a family, moving to different countries stands unique because it's a place where you discover who you are in every aspect: professionally, socially and emotionally. For this I am one of the luckiest graduates because I got to have this life-changing experience at such a beautiful and spirited college HBTI." **-Anupama Misra**

"Getting into HBTI in 1991 was a proud moment for me and my family. Being a day scholar, the scariest part in the initial days of the first semester was the ragging at the entry, exit and the break time at college. Though it was terrifying at that time, I learnt my first lesson of properly introducing myself." **-Deepika Ambwani**

"The place was unfamiliar but pretty soon it became everything that made me who I am today. The memories of industrial trip to Bombay organized by department and sponsored by World Bank will forever be engraved in my heart as moments which made me feel truly alive and made me realize the importance of being in a group." **-Dr. Chhaya Dalela**

Right from the initial days of HBTI, constant efforts have been put to give the students an industry experience which would help them in understanding the basis of their respective fields in a much better way. So, the students are taught considering in mind the industry and production aspect of their fields. In order to work upon these industries and HBTI were interlocked for giving the best service to the industries and to the nation.

According to some old students of HBTI, like Shri H.S. Chaturvedi, Shri S.N. Kapoor, and Shri T.R. Sharma ragging was first of all started in 1965. Before 1965, there was no activity like ragging. In the words of Shri T.R. Sharma, a student of 1939 batch, "Every admitted student was treated very gently and after some time when he became more familiar, we used to make fun with him verbally."

Ragging is a reprehensible act, which does no good to any one and HBTI has taken some bold and severe steps in accordance with 2009 Supreme Court judgement and 2010 Uttar Pradesh Prohibition of Ragging in Educational Institutions Act, which formulated that every institution must have an Anti-Ragging Committee, Monitoring Cell and an Anti-Ragging Squad.

Accordingly, HBTU formed Anti-Ragging Committee as per AICTE norms and chaired by Vice Chancellor of HBTU, Kanpur. It shall be the duty of the Anti-Ragging Committee to ensure compliance with the provisions of the AICTE Regulations to monitor and oversee the

performance of Anti Ragging Squads in prevention of ragging in the institution.

HBTI has also been a torchbearer for Girl Education, as the first girl students admitted to HBTI were Miss Pratibha Limaye and Miss Neela Patwardhan who took admission in 1966 in Civil Engineering and Chemical Engineering respectively. But the total number of girl students initially were 1.25% however, the percentage has improved to approximately 20% in the 2021 batch.

From home packed tiffins to Swiggy/Zomato era, from shopping in the streets to e-shopping, from posting letters to video-calling, from surfing books in the library to e-books, from researching on facts to googling them easily, from blackboards to smart boards and from physical labs to virtual labs, technology has taken a giant and radiant leap in the recent past that affected and changedthe student life in drastic ways. Knows, theshift of culture in student life has been very rapid, engaging and harmonious in nature.

Conclusively, these four years of college life are more enriching than any other time of life. Those early struggles for a student of 1st Year with Workshop jobs and Fourier & Laplace Transforms to bidding farewell to friends turned family.In Final Year and learning throughout this time interval improved their individual personalities and experiences in their respective student life. These four years where friends become family is being reminisced by the Harcourtians till date. Cherishing, learning and growing from all of the moments of these four years as a B.Tech student,develops common trait observed in all of the Harcourtians.

6.1 University Council of Students Activities (USAC)

Throughout the glorious 100 years journey, our Council of Students Activities (CSA) currently called University Students Activity Council (USAC) witnessed numerous trends in activities apart from academics.

The Council of Students Activities used to look after the extra-curricular and co-curricular activities of the students in the institute.

The Council was headed by the senior faculty members as a Chairman. The various Committees of the Council were Performing Arts, Athletics and Sports, Cinema, Photographic Club, Literary Sub-Council. The council was consisting of Patron, Chairman, Secretary and Convenor.

In 1992-93 it was decided that the students who opt for sports activity will be evaluated out of a total of 50 marks and they don't have to opt for any other activity. The other students will have to opt for any two activities out of cultural, literary and National Service Scheme (NSS) and will be evaluated out of 25 marks each by the respective Conveners.

However, the students were always encouraged to participate in as many as they like. Currently, USAC has sub-councils viz., NSS, Photography, Literary, Hobby, Sports, Yoga, Cultural,Technical, and Print & Social Media.

Activities of USACare carried out by the above sub councils under the supervision and financial control of respective convenors. Some of the important events are highlighted below:

The Sports Sub-council had facilities of almost all outdoor & indoor games. It also has a well-equipped gymnasium hall having facilities for gymnastics, weight lifting etc. which were introduced in the session 1990-91.

In 1991-92, the Yoga and the meditation activities were introduced which attracted a good number of students, faculty members and their families.

In 1992-93, with the increasing number of girls, and their interest in sports, the sub-council for the first time organized a cross-country, badminton and athletic championship for them separately.

University has one sports ground each in West and East Campus with excellent facilities for outdoor games such as Atheletics, Cricket, Hockey, Football and Lawn-Tennis and indoor games such as Table-tennis, Badminton, Chess and Gymnastics. Also University has recently developed a Turf Wicket alongwith pitch and ground roller of International standard for Cricket in West Campus. We have also Basket Ball Court with flood light facilities. A new Gymnasium with all modern facilities is also fully functional in West Campus.

In 1972-73, HBTI Golden Jubilee Sports Meet was organized during 14-22 January, 1973 for various Games, Atheletics, Cricket, Hockey, TT, Volleyball etc.

Annual Atheletic Meet during 3-4 March, 1978 was organized for various track and field events.

Inter-Branch Sports Competition for various games was organized in 2009, where HBTI Cricket Team was winner in National Level Sports Meet 'SANGRAM-2009' at IIT Roorkee.

Inter-Branch Sports Competition for various games was organized in 2016-17, where our teams won first position in Tabel-Tennis, Badminton, Basketball during National Level Sports Meet 'PRABHANJAN-17' organized at BIET, Jhansi.

Various Sports Activities organized every year during Induction Progarm for new Entrants for the last few years.

Adhyaay is a new initiative by the sub-councils of HBTU on the demand of former Vice Chancellor, Prof. Narendra Bahadur Singh to organize a combined Techno-Cultural Literary festival for the University.

Organized University Techno-Cultural Fest 'ADHYAAY-19' during 28-30 Nov, 2019.

Organized UP State Level Sports Competition 'AAGAZ-2020'during 15-17 Feb, 2020.

In order to meet the National objectives of NSS and in view of overwhelming response of students of HBTI towards services of nation one more Unit of NSS was created under Kanpur University. The institute students have really been very commited towards providing their voluntary services to the society and nation. The NSS units were doing regular activities in and around HBTI campuses and nearby villages. The activities include awareness programs, plantation, cleanliness drive, blood donation, eye donation pledge etc. The volunteers of NSS have been adopting schools in nearby villages and were teaching children over there.

The cultural sub-council turned over a new leaf with the organisation of an inter-collegiate dance festival "Goonj" on the 20th November, 1991.

Odyssey-45 events ranging from Cultural and Literary, to Fine Arts and Photography were organised.

Talents Nite are organized that aim primarily at providing more opportunity to the students to participate in various cultural events and further help in selecting the students to participate in the Intercollegiate/district level competitions. The first part used to comprise events like Skits, Mono Acting and Solo Instrumental recitals.Dumb charade, Kahanika, cartooning collage, sketching, extempore and painting were included in the second part. The talent nite served very well as a talent search programme.

Every year began with the debate and essay competitions, organised in English as well as Hindi. Students came in large numbers to exhibit their skills, making it a resounding start.

In the year 1993, VICHAR-93 a literary month was held in which various events like Debates, Creative writing, poetry writing, Extempore (all in Hindi & English) G.K. Quiz.

In the year 1886-87, the Literary sub-council started publication of quarterly wall magazine PRATIDHWANI' which acted as a news bulletin and kept the students and staff informed about the Institute.

Taking this sub-council to another level, a lot of different

competitions are being organized from time to time like "Notion Negotiations", "Vaarta" (A question of answers), "Shatak"(History quiz).

In the auspicious 100th year of HBTU, several special kind of quizzes has been organized like La Quiz Du Centenaire (How well do you know HBTU?).

From 1992, the Photography Club started organising workshops for freshers. During the tour, students were explained the process of focussing, aperture and shutter speed. The Photography Club held two competitions for processing of Black & White negatives.

The Club had started a wall Magazine in the year 1993-94 containing articles on various aspects of Photography. A new contest was introduced for the first time for Mr. Photogenic and Miss Photogenic, HBTI in 1995-96.

The Photograpic sub-council preserving its excellence has kept organizing competitions throughout all these years and now is also quite active on different social media platforms specially Instagram where the club organized several competitions in which the students including the alumni actively take part.

Cinema club tried to provide a feast to the young lot by showing lesson giving movies. The messages sent by these films were well accepted by the students. Most of the movies shown to the students were having a touch of Indian classics. Thus, Cinema Club catered on entertainment up to the mark and lived up to its expectations.

In the session 1994-95, Cinema Club brought extra entertainment to the students as some latest components were introduced to enhance the efficiency of the projector and picture and sound qualities of the movies. Concept of "Cine week" was introduced in 1972-73. In 1996-97 the "Cinema Club" was transformed into the "Hobby Club".

As our university was nearing its 100 glorious years, it was a great opportunity to introduce a weekly newsletter as we lacked in any means of mass communication. This was also an apt initiative to educate the students about the past, present and future of our institution.

पल्स ऑफ एच.बी.टी.यू.

PSMSC is the only sub-council under University's Student Activity Council (USAC) which has been active

विश्वविद्यालय ने छात्रों की अभिव्यक्ति की स्वतंत्रता के लिए पन्द्रह दिवसीय पत्रिका का प्रकाशन छात्रों द्वारा किया जाता है, जोकि पूरे भारत में लगभग अपने प्रकार का चौथा मुख-पत्र है।

during the global pandemic of Covid-19.

The Technical sub-council is the newest of all the councils and has been started in the centennial year of our college that is 2021. This council has been formed to increase the individual contribution to the industry by boosting students' technical knowledge. In a world of bookish culture, inculcating technical skills remains the need of the hour and that is what this sub-council is supposed to fulfil.

6.2 Hostel

Before, vacations meant going away from home. Now, vacations mean coming back to home. -Story of Every hostellite. **-Subiya Hussain.**

Starting college is like entering in a new phase of life. New city, new friends, new experiences, new responsibilities these are just a glimpses of what awaits you. One of the biggest change that occurs in the life of most students is shifting to college hostels. The nervousness and anxiety of having to move to a different city and sharing your room with a stranger etc, it all fades away in the excitement of the freedom that college life offers. Although, hostel life can be a lot of fun there are some aspects that one must be aware of before embarking upon the new roller coaster ride of being the naive hosteller.

Students might feel homesick but at the same time they would also be pretty excited about living alone. It will be like a feeling of nostalgia and attachment to the hostel that they can't just cast off. A constant thing that has been observed over time in the hostellers of HBTU is the readiness to adapt to the new environment, learning each and every day and thus improving the overall personality. Even our alumni also remember this beautiful time of four years spent in hostel with fondness, as it contributed in making them what they are right now.

The nature and the extent of ragging in hostels depend on the degree of strictness of the hostel rules. HBTU hostels have a lot to offer in terms of experiences and growth of an individual with certain rules and regulations imposed in order to cultivate a disciplined lifestyle. With such compliance, one of the biggest worries of the students going to college shall be relieved.

Hostel life is a liberating and sacred experience. Over the years in HBTU, both hostels and hostel life has drastically changed but one thing was certain, it's a great place to live. The atmosphere is conducive to studying as well as traits of home life such as cooperation, fellow–feeling, and self–management. In a hostel, you have a lot of responsibilities. For example, being the hostel representative, which inculcates leadership qualities among the students. One is no longer under the security of their parents or elders, and is free to exercise their own judgement. One can easily

fall prey to bad company, wasting time, and other vices. This is the genuine test of what one is. One has the power to make or break their career. “Growing up has its own set of pros and cons”, which even gets approved by the hostel life.

Among the various things which turned around through the years, one was girls' hostel which didn't exist till late nineties. In those days instead of hostels existed 3-bedroom apartments with so called “hospital beds” three in each room which were super crowded and today girls' hostel is one of the most beautifully built places in HBTU which are highly organized and spacious.

On the other hand, the boys' hostels, especially the lake view hostels, where the freshmen staysare in the college campus. This hostel (LV OLD) had been built quite a long time back and had seen its glorious days also shadows its past and gets reminisced by our alumni every time. Whereas new hostels like WCH4 and spooky place in which it is located in West Campus are now talk of the university.

In the former years, books and notes were the only source which could lead students to knowledge more importantly get good grades or just passing anyhow. Our alumni remember how every hosteller used to help their fellows in studies, waking up till early in the morning, helping each other to study right before the exam days. Students used to wander from room to room for notes and books just before the day of examination but in this generation of 4G, getting them just one tap away on the internet and are seamlessly shared among students.

And how can we miss upon the other important aspect of college life that is Hostel Mess which feeds students for the next four years of their college life, in the bygone days mess was the only source of food for the students where they used to have endless conversations on topics like politics, sports and various other topics of interests. Every alumnus who was once a hosteller remembers their long nights in which most of the times one starts to feel hungry, and how they used to keep snacks or sometimes sleep without eating. But this has changed over the years due to introduction of food delivery apps like Zomato and Swiggy, which are no less than angels for the present-day hostellers.

From the inception of HBTU to the present, hostel life is a bliss and full of learning experiences which shapes ones future path to success.

Semesters changed, years changed, decades changed but the innumerable memories created during the hostel life still lives on in each Harcourtian's heart.

7

PHILANTHROPIC WORKS OF INSTITUTE/UNIVERSITY

In the year 2018, life came to a standstill in Kerala with floods and landslides leading to unforeseen miseries and chaos. With the central idea of "We can do no great things, only small things with great love", students of HBTU organized a fundraiser for the flood victims. In a brief period of two days, more than 200 students and more than 50 workers joined hands and made the fundraiser a successful one. They put drop boxes at different locations in the university premises for students and other college members to donate the required items. They had prepared a list of items required for the victims. Vital supplies like money, clothing, medicines, and food items were collected in the drive. More than 300 kgs of relief material were collected and sent to Kerala to those in need. Their motto of collection drive was successfully fulfilled which was evident from the great scale by the participation of students as well as faculty members. In 2019, during the Orissa floods, faculty members and workers donated their one day's salary to the "Chief Ministers' Relief Fund".

The faculty members and workers also contributed their one day's salary to provide support and necessary items to the Kashmir flood victims.

University run cleanliness drive, as Mission Clean and Green in &around HBTU Kanpur

7.1 Swachchta Hi Seva

Students and faculty of HBTU took Swachata as their mission. Various drives, workshops, and activities like in-house swachhta drives, swachhta weeks, students swachhta initiatives in different villages of Kanpur were undertaken. University students formed three teams and worked for more than 100 hours, making significant contributions in raising awareness among the village people. The students addressed the problems that stand in the way of making Kanpur Nagar an open-defecation free district. They explained to the residents the importance of using individual or public toilets and also about the various diseases

that could be contracted because of open defecation. Even in the past, "Clean HBTI, Healthy HBTI" campaigns have been organized which have had a direct social impact on the life of the HBTU fraternity as well as the residents of nearby localities.

7.2 Organization of Blood Donation Camps

Human blood is an essential element of human life with no substitute. In many major surgeries and trauma emergencies, the use of whole blood is now well accepted. Blood transfusion has been responsible for saving millions of lives each year around the world. Yet the quantity and quality of blood pool available for transfusion is still a major concern across the globe, especially in developing countries. According to the World Health Organization (WHO), the estimated blood requirement for the Southeast Asian region is about 16 million units per annum, but it collects just about 9.4 million units, leaving a gap of six million units. India is lagging behind in blood collection despite its huge population of over one billion. To address this issue, HBTU Kanpur organized various Blood Donation Camps with the help of its Alumni and students.

The Blood Donation camp organized by Harcourt Butler Technical University in coordination with Rajkiya Chikitsalaya, Kanpur collected many units of blood. The students and the entire HBTU family pledged to voluntarily donate blood for those in need.

7.3 Development of rainwater harvesting system based infrastructure in the university

The growing concern over the depleting groundwater level has started sensitizing the masses towards its conservation. To healthily deal with emotions contribute to improving the groundwater level, the university administration decided to adopt a rainwater harvesting system in all the infrastructure being constructed or to be constructed on the campus. The consumption of water is much higher than its storage. The groundwater is not being recharged because of excessive urbanization and concretization.

7.4 Workshop to create awareness on menstrual cycle: breaking stereotypes

University students Shubhangi Singh and Deeksha Dwivedi organized a workshop to make women of Udaipur village aware of the menstrual cycle. They educated the women about the science behind menstruation and talked about the myths surrounding it.

7.5 Prohibition of Single-Use Plastics in the University

Modern conveniences like a simple plastic straw, a take-out carton, etc. are so ubiquitous—and so quickly thrown out—that they hardly register in our minds. Single-use plastics come with a steep environmental

price—one that we'll be paying off for the millennia. Plastic addiction is having a devastating impact on our oceans, our wildlife, and our health. Encouraged by this devastating situation, in June 2018, Prime Minister Narendra Modi announced that India will eliminate all single-use plastic items in the country by 2022. In cooperation with the Government's campaign to ban plastic, Harcourt Butler Technical University decided to impose a ban on the use of single-use plastic on its campus.

7.6 Literacy Campaign

The students of the university educated the children of economically and socially backward sections of the society. The students provided lessons and delivered lectures that were instrumental in their upliftment.

7.7 During Covid-19 Pandemic

Steps were taken by the university in the interest of society during the Covid Pandemic:

7.7.1 Janta Rasoi

Everybody has the right to healthy and hygienic food irrespective of caste, creed, religion, or financial condition. It is saddening to see the homeless and destitute not being able to get even two square meals a day. The condition worsened when the entire nation was under lockdown. HBTU operated a 'Janta Rasoi' to provide healthy and delicious meals to the financially vulnerable sections of society. The university students, teachers, staff members, employees, everyone joined hands for this noble cause.

7.7.2 Contribution of the University to the Chief Minister's Relief Fund

In the campaign being run by the

government against the infection of covid 19, university personnel, teachers and workers donated their two days salary thus contributing 8 lakh 50 thousand Rupees to the aid.

7.7.3 HBTU provided hostel and guest house rooms

The university provided its hostel rooms on demand to the administration as isolation centers. It also provided its Guest House as an accommodation facility for doctors.

7.7.4 Vaccination drive

Needless to mention that the second wave of the Corona pandemic has affected our country so badly that despite the strict precautions enforced against it, we faced a lot of challenges in different forms. Different parts of the country are still passing through a fight against global pandemic due to the mutating nature of novel Coronavirus leading to COVID-19 disease. A small inadvertent mistake may even create havoc in our lives.

The university advised students to take an active part in the vaccination drives and get themselves vaccinated, if eligible. It also encouraged them to motivate and encourage their family members/relatives and community members to get themselves vaccinated whenever their turn appears.

The success of the drive would not only safeguard our lives but also save the interest of the nation.

7.7.5 Mental health awareness campaign

Throughout the world, an essential modus of prevention from COVID- 19 infection has been isolation and social distancing strategies to protect from the risk of infection. On these grounds, since

January 2020, the country has been under several lockdowns, regional and national containment zones. Against this backdrop, one of the principal measures taken during lockdown has been the closure of schools, educational institutes, and activity areas. These inexorable circumstances which are beyond normal experience, lead to stress, anxiety, and a feeling of helplessness in all.

To bring a ray of hope and keep the students and all the people associated with the university, HBTU campaigned to raise awareness against mental health issues. Tips for coping with stress were released, for example;

- It's normal to feel sad, stressed, confused, and angry during this time of crisis. Talking to people you trust can help. Get in touch with your loved ones and connect.
- Be aware that not everything being said about Covid is correct. Go to trusted sources like your state or local health department, the CDC, or WHO.
- Limit your stress and fear by reducing how much time you spend watching the news or reading or scrolling through social media, especially when you feel that it is upsetting information.
- Do things that you have done in the past to help manage challenges and stress. Know that you have developed skills to manage your emotions and use them during this time too.
- If you are staying at home, stay healthy by eating well, getting plenty of sleep, exercising regularly, and having good social

गैर सरकारी संस्था ब्रिंग स्माईल आर्गनाईजेशन द्वारा जिला प्रशासन को सहायता

contact with loved ones through chats and video calls.

- Deal with your emotions in a healthy way. Have a plan in case you start to feel overwhelmed, and don't hesitate to talk to a Counsellor or Therapist if you need to.

7.7.6 Innovations amid the pandemic

i. Portable ventilator developed by the university:

Inspired by the University's outstanding Student Development Centre, Shri Shiv Shankar Upadhyaya developed a portable ventilator system that has proven to be very economical in fighting the virus.

ii. Automatic hand dispenser

The Covid Pandemic required more approaches to be sought off effectively. With this objective in mind, university students constantly innovated to come up with projects that would be very useful in the time of need.

In the current scenario of the global outbreak, it is advised by WHO (world health organization) to maintain HealthyHand Wash and Sanitation Habits, but the main problem is the way we do it, that is by physical touch. Touching alcohol containers or hand sanitizers with infected hands can spread the virus to the next person. As a solution to this critical problem, students of HBTU Mayank Khanna and Anjaney Basedia, under the able guidance of Dr. A.K. Rathore, developed an automatic hand dispenser project. This is a contactless dispenser system that would prevent any sort of transmission. Using a pedal-operated dispenser system is quite obsolete, thus the system was developed on the grounds of automation. To mitigate the ill effects of the constant use of alcohol-based sanitizer, Anjaney Basedia innovated a budget-friendly herbal sanitizer.

Using basic components like clay pot and 120-150 cfm fan, HBTU student Shri Uttam Sharma developed an aerosol-based foot-driven sanitizer machine.

iii. Innovation in the design of face shields

Use of masks, face shields, PPE kits, gloves alongwith physical distance is necessary to prevent coronavirus infection. Wearing masks and gloves is quite safe for the general public but PPE kits, face shields are also necessary for doctors and the paramedical staff combating on the frontlines.

In the face shields that are available in the market at the moment,

there is support from the band facing right in front of the forehead. By tying it backward, there is a considerable amount of tension that is exerted on the forehead. This makes tying face shields for long durations an odious task. To find a solution to this problem, experts from HBTU Prof. Jitendra Bhaskar alongwith his wife Dr. Jyotika Singh came up with an innovative design of the face shields. The shield is quite economical, costing only rupees 50. One of the salient features of the shield is that it can be folded and kept inside a bag easily. Negotiations with several companies for its manufacture and sale are also in their final stages. The face shield is made of transparent sheets using Japanese paper folding techniques. The lanyard at its top is used to tie it to the back of the head, thus releasing the tension created on the forehead.

Medals in the institution

Various medals and their contributors are as follows:

Medal	Name	Years	Branch
Gold Medal	Prof. K.K. Nigam	1985, 86, 87, 88, 89, 90, 91, 93, 94	UG Engineering & Technology
Silver Medal	Prof. K.K. Nigam	1985, 86, 87, 88, 89, 90, 91, 93,	B.Tech Leather Technology
Silver Medal	Miss. Deepti	1985, 86	UG Engineering
Gold Medal	Mr. Gouri Shanker Gupta	1985, 86	B.Tech.
Gold Medal	Association of Mech. Engineers	1985, 86	B.Tech. Electrical Engineering
Gold Medal	Mr. Raghunandan Prasad Shirvastava	1986, 87, 88, 89, 90	B.Tech Mechanical Engineering
Gold Medal	Messrs, M.K.J. Corporation	1985, 86, 87, 88, 89, 90, 91, 93, 94	B.Tech Leather Technology
Gold Medal	Messrs, H.Moula. Bux & Sons	1985, 86, 87, 88	B.Tech Leather Technology
Gold Medal	Bhagwan Das Khanna	1985, 86, 87, 88, 89, 90, 91, 93, 94	B.Tech Chemical Technology
Gold Medal	Messrs, Annapurna Biscuit Manufacturing	1985, 86, 87, 88, 89, 90, 91, 93, 94	B.Tech Food Technology
Gold Medal	A.R.Singhal	1985, 86, 87, 88, 89, 90, 91, 93, 94	B.Tech Paint Technology
Gold Medal	M.P. Jhunjhunwala	1985, 86, 87, 88, 89, 90, 91, 93, 94	B.Tech Oil Technology
Gold Medal	Rao Saheb. D.Y. Athwale	1985, 86, 87, 88	M.Tech Chemical Tech. & Oil & Paint Tech.
Cash Prize of Rs.100	H.B.T.I. Kanpur	1985, 86, 87, 88, 89, 90, 91, 93, 94	All UG & PG Examination

8

WORDS OF ALUMNI

BIRD'S EYE VIEW (FROM AN EMINENT ALUMNUS)

This is an account of the history of an esteemed institute HBTI Kanpur, became a state university HBTU Kanpur, 2016. Now it is celebrating its centenary in 2021. The writer himself is a witness to 55 years of its glorious journey from 1966 to 2021 and rest details as told by the seniors have been included in the write up.

Let the monograph start from the post independent India when it became republic. The institute had Oil Technology and Chemical Engineering as the first course that the institute had at the time such was the eminence and fame of the institute that its students were recognized all over in the industries in un-divided India including Pakistan and the student used to go to Lahore for practical training. The Institute had Dr. D. R. Dhingra as Principal in 1950s and it used to award AHBTI and FHBTI degrees to the students which had recognition of being equivalent to graduate degrees. In late fifties Doctor Hrishikesh Trivedi became Principal and the institute continued working producing UG and PG students and doing research in Chemical Sciences and Technologies which was its mandate when it was established in 1921.

The institute housed Glass Technology Department and Alcohol Technology Department of Government of Uttar Pradesh also and their experts used to sit here only. Here it will be worthwhile remembering Shri W. R. Damle, the alcohol expert, the for UP. The Institute had only the front building to begin with where all the activities were carried out. The second building came into existence when IIT Kanpur was to be started in 1959 then two U Shaped building where (i) presently Maths, Chemical Engineering, Plastic, and (ii) Oil, and Paint Technologies Department are housed were added to the first building. Prof. P. K.Kelkar, the first Director of IIT Kanpur used to sit in the second building near the wooden gate and the first batch of students IIT Kanpur and HBTI studied together. In 1960, IIT shifted to its own campus at Kalyanpur.

It is worthwhile to mention that even National Sugar Institute (NSI), Asia's one of the biggest sugar institutes also worked from this premises. Later when they created their infrastructure they moved to their campus.

In 1962 Dr. C.R. Mitra an MIT Aluminus, became the principal of HBTI. During his tenure 1962-1968 the post of principal was converted to the Director and the Institute grew leaps and bounds. The new departments of Biochemical Engineering, Food and Plastic Technology in Chemical Technology and Mechanical and Electrical Engineering as supporting

departments were started in year 1964 & 1965. Thetechnology deparments courses were of three year duration and engineering departments' courses of four year duration. The first batch of these deparments came out in year 1968. Earlier the Oil Technology course was of two years and PG of one year only. The notable head of the departments during this period were Dr. D.Mangaraj, Plastics, Prof. R.P. Singh, Chemical Engineering, Prof T. R. Sharma, Oils, Prof. A. C. Gupta Paints, Prof. T. K. Ghosh (Later joined IIT Delhi) of BEFT, Prof. S. Prasad, Mechanical Engineering and Prof. S. Guha (Later joined IIT Delhi), Electrical Engineering. A new course of B.Tech.in Civil Engineering was started in year 1966 and in this year only a largest batch of Chemical Engineering of 90 students were admitted. After that the strength was reduced to 60.

In 1969 Dr. C. R. Mitra left HBTI and joined BITS, Pilani as Director & continued there for more than twenty years. Professor R. S. Chaturvedi from Roorkee University then joined HBTI as Director in 1969 and retired in 1971. HBTI continued its stride in the field of technology and continued greatly to the development of the UP State in particular and country in general. In year 1973, HBTI celebrated its Golden Jubilee. Hon'ble Vice President of India Shri Gopal Swarup Pathak was the Chief Guest. A directory of students in the form of book consisting of students photographs and their permanent address was also brought out on this occasion. Dr. S. D. Shukla, the then industrial adviser to UP Government, joined the institute as Director in 1972 and continued till 1983. A new course B.Tech in Leather was also started in 1978. Prof. A.K. Vashistha took over the charge of the Director in 1983 and continued till 1996.

The strength of Basic Science departments. i.e, Physics, Chemistry and Mathematics department had been the “Forte” of HBTI. These departments were turning out Ph. D students also. During the period that followed 1972 institute was contributing more than two hundred research papers every year – Hundred paper from basic science departments headed by Prof. D. P. Khandelwal, Physics, Prof. R. S.Tiwari, Chemistry and Prof. P. N. Tondon, Maths departments, respectively. Another hundred research paper were contributed by Technology & Engineering Depts. Headed by Dr. G.N. Pande, Chemical Engineering, Prof. A. K. Vasishtha, Oil and Paint, Prof. G. N. Mathur, Plastic, Prof. B. Satyanarayan, Prof. C.V.S.K. Rao Civil, Prof. V.K. Jain Electrical Engineering, Prof. N. L. Kachhara, Prof. S. J. Pandey, Mechanical Engineering department.

HBTI is honoured to have conducted the combined entrance examination CEE also in the years 1989, 1990 and 1991 for admission of the students to all the engineering colleges of UP State for both government and private sector.

Prof. B.Satyanarayana became Actg. Director in year 1983. He was succeeded by Prof. A. K. Vasishtha in December 1983. Professor V. K. Jain became the Director in 1996 to 2001. Prof. C.V.S.K. Rao Became Actg, Director in June 2001. After that Prof. A.P. Dwivedi became Actg. Director. Prof. K.P. Singh became the Director in 2001 to 2004. Prof. P. N. Maheswari also became Actg. Director in Oct 2004 to 2005. Prof. R.P. Singh became Director in 2005 to 2008. The writer (Prof. S. K. Awasthi) himself became Actg. Director from Jan 2008 to Dec. 2008. He was succeeded by Professor R. K. Khitoliya in Dec. 2008 to Dec. 2011. Prof. J.S.P. Rai became Actg. Director in Dec. 2011 to Dec. 2013. Prof. M.C. Shukla became Actg. Director in 2014. Professor A.K. Nagpal, Professor Ashok Kumar and Dr. D. B. Shakyawar became Act. Director in 2014, 2015 and 2016, respectively.

Prof. M.Z. Khan became first Vice Chancellor of the HBTU in September 2016. Professor Vinay Kumar Phatak took over the additional charge of the Vice Chancellorship in May 2017 to Feb 2018.

Prof. N.B. Singh became Vice Chancellor in 2018 succeeded by the present Vice Chancellor Prof. Samsher in year 2021.

Besides providing high end technical in both the conventional and new emerging area the institute takes care of all round development of the students. The students have significantly contributed to the supply of technical man power for the industries and scientist for CSIR researches labs and country atomic energy space and entrepreneurs programmers. Many of the alumni have risen to the highest position in the organization. In this time also, HBTI had has been able to make its mark in academic institute, industries, research institutes and as entrepreneurs.

The development of the students in extra-curricular activities has been taken care by the council of the students activities headed by faculty members as its chairman supported by the honorary secretary and assisted by various sub council like a sports cultural photography etc., where in faculty at as convener. Every sub Council is duly assisted by a student secretary who is duly elected by the students. The convener and the student secretary who is duly elected by the students. The convener and the student secretary adopt a few more members for their help. This kind of set up has helped the students in their overall growth and performance at inter-institute levels in cultural festivals, technical festivals and various tournaments and athletics meets winning prizes and bringing laurels for the institute.

It is exhilarating to see that the institute got the status of full fledged State University in 2016, five years before the centenary years. The University certainly needs advanced centres and center of excellence in the new and emerging areas. This requires laying emphasis on interdisciplinary

and multidisciplinary research leading to the development of technologies that helps society in making life comfortable and improving their quality of life.

Having centre of excellence in Chemical Engineering and Chemical Technology, centre for integrated systems in sensing, imaging and communication, centre for Nano-material Science and Processing Technology, centre for Environmental and Energy System, advance centre for Mechanical Engineering involving research on joining technology and robots and robotics in general and a centre for research on advanced power systems would to go a long way in fostering research in new areas.

The deliverables from these advanced centres will certainly be impacting the life of a common man and engineering and technology would serve the noble cause of humanity.

Prof. S.K. Awasthi

Former Director

HBTI Kanpur & BIET Jhansi

"I am happy to note you are compiling memoirs of old HBTI alumni for Centenary Year Celebrations. At the outset, I extend warm greetings and congratulate HBTU faculty on the occasion of Centenary Year Celebrations (1921-2021), When I think of my Alma matter, I get glimpses of lovely architecture, high ceiling specious buildings, well ventilated class rooms and peaceful ambiance congenial to studies. We were fortunate to have an excellent faculty (Prof R P Singh, Mr. Saxena, Mr. Sherry, Mr. Vaidya, Mr. Srivastava to name a few) in Chemical Engineering department (1967-71). They were instrumental not only in imparting quality education but also mentored us for personality development. In particular, industrial visit tour was quite interesting and ignited urge in me to serve process industry. It is my pleasure to share with you that I am serving most noble process industry-Paper for close to five decades. Thanks to sound basics developed in HBTI, I could rise to very responsible position wherein I look after operation management of a large Paper mill of 500 TPD capacity.

I am attaching some old photographs and recognition received during my career".

- Alok K Mehrotra

Sr. President Operations

Seshasayee Paper and Boards

I am very pleased to learn that our dear Alma Mater HBTI is completing 100 years of teaching,educating and forming our young students and helping them in their growth.I did not know till recently that HBTI is

now HBTU.

Yes, I joined HBTI in 1958 as a student in their first and I understand the last Three year B.Sc. Chemical Engineeing program. I graduated in 1961. Dr.H.Trivedi was the Principal and Dr.J.B. Lal Head of the Department.

I lived in the Lake View Hostel ,which was ready for occupation in 1960,Earlier I lived at Labor Colony Hostel in Nawabgunj.

I have very fond memories of my stay there as a student, interestingly soon after my graduation ,I was offered a Lecturer position in the department which though,I accepted but resigned within a few months to join Ph.D program at I.I.T.,Bombay .I completed Ph.D. in 1965.

Later,I moved abroad, worked for Texaco Inc, a major petroleum Refinery. Subsequently, I entered academic life,worked in different Universities in Venezuela, USA and the U.K. I am now retired and live in Venezuela.

Yes, I played Cricket ,Badminton while at HBTI.

Unfortunately, after graduating I never returned to HBTI for a visit or for any other reason. I am sure it has grown beyond recognition.

I would very much like to participate in person the centenary celebration of the Institue which formed me a successful chemical enginneer.

The pandemic of Coronavirus , suspension of air flights,etc. will not let me.

To sum up I wish you.Dr. Rajesh and all the faculties,staff and students of HBTU a very fruitful, succesful and memorable centenary celebrations.

Thank you for your invitation.

- Prof. Ranvir Aggarwal

Ph.D.,D.I.C.,C.Eng (Retired)

The more time that passes since my last days at HBTI, the more I've come to realize how fundamental and invaluable the college experience is in life. Out of the many milestones in a person's life- working their first job, having a family, moving to different countries stands unique because it's a place where you discover who you are in every aspect: professionally, socially, and emotionally. For this, I am one of the luckiest graduates because I got to have this life-changing experience at such a beautiful and spirited college, HBTI.

I remember all the overwhelming emotions I felt my first day. The

hostel was just a 3 bedroom apartment for 9 girls and, coming from a nuclear family, it seemed a bit too crowded and a little crazy for me. But slowly, I started enjoying that noise, revelling in that 24/7 chaos, and bonded with my lifetime friends there. It's where I met one of my closest friends, Abha, someone who I can gossip with for many sleepless nights even now, 26 years after graduation.

My first year was a roller coaster ride, settling in the college atmosphere, hostel, their food, ragging, and being conflicted about what to choose as my major. In my second year, I decided to choose Electronics. I'm proud of my choice even though it was difficult at times (26 years later, the mere name “Millman Halkias” still gives me chills). My academic path at HBTI was challenging- I remember just one day before finals I'd gone to my professor's house because I was still struggling with some of the concepts. But the academics at HBTI was also rewarding- when my second-year results came out, I'd got the highest marks in Integrated Circuits, which boosted my confidence and taught me that I could do anything I set my mind to.

While college encompassed a lot of big moments, HBTI had its memorable moments as well. I remember on sports day, I'd won 1st and 2nd place in the sports day program, despite the fact that I rarely, if ever, have played sports in my life. I won because only 3 or 4 girls participated in the game, so you can calculate what my probability of winning was.

The HBTI environment gave me perspective, work ethic, and an education that helped me professionally throughout my life. Industrial training was an unforgettable experience for me. At the time, that Rs 3,000 stipend made me feel like the richest person in the world. Industrial training helped me build a passion for data analysis that ultimately founded my career. I can't thank all the teachers enough, especially my HOD, Mr. K.K. Tripthi, who always motivated me and was someone I could talk to, even on the last day of my college when we just chit-chatted in his room for almost an hour. Today all my professional success is the result of the critical thinking I developed in his class.

HBTI completely changed my life career-wise, but beyond that, the friendships I had gained at HBTI had a profound impact on me too. I remember both of my wardens, Mrs. Trishla Gupta and Mrs. Rachana Astana, took care of me in my hostel and truly made it my home away from home. When I had gone to IIT Kanpur's annual function in my third year, I'd returned to my hostel after midnight. I was so scared when the watchman asked me to meet Rachana mam before entering the hostel. I thought that she would scold me but she did not say anything when I told her the truth. She believed me and it gave me confidence, and that taught me to tell the truth in

life, even if there might be some consequences.

My kids are now going to college and I know that it will transform both their personality and future, as the college did for me. Even after 26 years, taking a trip down the HBTI memory lane not only brings a smile on the face but also reminds me of the courage to face any challenges. All the credit for my wonderful experience goes to my HBTI friends, faculty and staff, that not only includes the professors but also the administrative staff, lab assistants, the cafe waiters, cooks in our hostel mess, and janitors. I cannot express my gratitude in words for everyone making my time at HBTI such an extraordinary golden four years.

- Anupama Misra

MUFG Bank. Los Angeles, California, USA

It was a very proud moment getting under 200 rank in UPEE in 1991 after 12th. Those were the days when counselling, admission, branch allotment all just passed like a dream come true. My joy of getting admission in HBTI doubled, when my father gifted a Hero Puch to me for going to HBTI, as I was a day scholar.

I was happy to be in HBTI as I always wanted to be an Engineer since childhood, following my fathers' footsteps, who also did his B.Tech, Mechanical from HBTI. Though I wanted Electronics branch but I was allotted Electrical in first year. However, in Second year, I got a promoted to Electronics. I tried to focus on my Studies, but easier said than done when you are coming from an all-boys college :-). I also appeared for IIT entrance while I was in HBTI and got Electricals in IIT-BHU, but I found it difficult to get acquainted with new environment at IIT-BHU. So, I decided to continue in HBTI and not to lose 1 year and ;-) .

It was a wonderful time studying interesting subjects and teachers giving their best to explain the topics. Rachna Ashtana ma'am taught us Digital Electronics, Trishala Gupta ma'am Microwave and Optical Electronics, Rajni Bisth ma'am Microelectronics, Arun Kumar Singh sirAntenna & Communications, Yashpal sir Elecrical machines and Sanjay Srivastava sir for guidance on final year Project. I would like to thank all teachers for their valuable knowledge that they imparted to us.

I would like to share few incidents :- (sacchi ghatnao per adharit)

Rajni Bisht ma'am by mistake gave some extra marks in mid-sem examination and I reached out to her for correction, She still remembers my honesty after 28 years now. In another incident, in 2nd year during out final semester practical examination, the external examiner asked me to draw wave form of an RC circuit as observed on an oscilloscope. Somehow, I drew it all reverse, all peaks downside. My group mates knew the correct

answer and were stunned that how come I do not know it (being in top rankers). Suddenly, I realised my mistake and to correct it I told him that we will see that waveform when you put probes in reverse way. My witty answer probably amused examiner and I was saved.

I had developed a FM Transmitter for one of my projects, by following the circuit from the EFY magazine. I used components as written in circuit and wow it worked. On the evaluation Day, We all had exhibited our projects in lab room and a panel of teachers came to evaluate projects. Bal Gopal sir was very strict and always went in great details of difficult formulae. Looking into my project, he asked me," Is it working?" and I showed him the demo. Then he asked,"What is the frequency of your transmitter?" I replied, "100.2 MHz, sir". "How you know it? Show me the calculations?", he asked again. I said, "I know because it is tuning to that frequency in radio." He got frustrated and said, "May be this radio is showing wrong readings." I responded, "But I had checked on another radio at my home and it tuned to the same 100.2 Mhz frequency." He was getting furious as he was looking for calculations and formulae. "Ok, what is the range?", came the next question. I said," 100 mtrs." Now he asked, "How do you know it is 100 mtrs.?" I said,"I moved away from radio and checked till what distance the signal is coming and that is how I measured it." I was sure that he wasn't satisfied with my answers, thanks to other teachers, the panel moved to other demos and I was saved.

HBTI days were happiest days of my life and I even developed skill of writing poems in 2-3 year just because my friend was writing it and gaining points in ;-) . Have vivid memories of Industrial tour to Mumbai (Bombay) . Whenever I reminisce those days and see all my batch mates in twenties, I just forget that we are 47+ now.

I could finally fulfil my dream of studying in IIT Kanpur via MTech thanks to my HBTI teachers for imparting knowledge in all subjects to get good score in the GATE Exam.

- Vipin Tripathi

TCS - Technical Architect, Delhi

Some relationships aren't blood relations, but they're ones you live with your soul. I had a similar relationship with my HBTI teachers and EC95 friends, all of them had a profound impact on my heart and soul.

When I came in 1991 for my admission counselling, I was sitting outside the auditorium, near Electronics and Electrical Department and waiting for my turn, I saw a lady with a radiant smile and positive energy, walking towards Electronics and Electrical Department. I got connected with her immediately. I had no idea at the time that our relationship would

last a lifetime.

Oh yeah, she was Dr Trishla Gupta Mam. My relationship with her is so interesting that I could write a book about it. She means the world to me and I can't articulate what she means to me in words.

I met Dr. Rekha Bali, who taught us Mathematics, during my first year. She left an indelible mark on my life. She was always there for me whenever I needed support. I'm not sure how many times she had borrowed books from the library on my behalf.

Workshop and Engineering Graphics were the toughest subjects for me in the first year. During the workshops, I broke my T-Shape tool and I melted the iron rod in the black-smithy furnace which had to be bent in the shape of 8. Second year was very interesting, since this was the time when the core subjects of electronics engineering were introduced. All our teachers from the Electronics Engineering Department guided us through these subjects with full dedication. Late Dr Bal Gopal and Dr Rachna Asthana taught us Electronics Devices and Circuits and Basic Electronics.

Sir (Late Dr Bal Gopal), you are no more with us, but you are always in my heart. I have many memories with Dr Rachna Asthana and I would like to highlight when I was working in Bangalore, M 'am visited her sister and family. I went to see her off at the station, where she gave me five hundred rupees. I still have that note of five hundred with me as a fond remembrance.

In the third year, Mr Arun Kumar Singh, Dr K K Tripathi, Dr Rajani Bisht and Dr Trishla Gupta introduced to us to Antenna and Wave Propagation and Microwave Engineering were the toughest subjects taught by Dr Trishla Gupta, Late Dr K K Tripathi taught us Microprocessor System and Application, Mr Arun Kumar taught us Digital Electronics and Communication System and Dr Rajani Bisht taught us Industrial Instrumentation and Microelectronic in the third year.

I still have excellent bonding Mr Arun Kumar Singh. We met in Bangalore when he was working for Infosys and I was working for Wipro. We came to the USA at the same time, and we reside very close to each other. He instilled in me the ability to be resilient and strong in the face of adversity.

Dr Rajani Bisht taught us to review what we had learned the day before when we returned to class the next day. She used to pick us at random to answer her questions. Though we used to cross our fingers and pray to God that she wouldn't pick us to answer her questions, but she has taught us the importance of revision for a long term learning and retention.

Still remember the final year project very vividly. Our project was called "a traffic light control system," and there was a slight programming

error, which resulted in the green light turning on earlier than planned. Dr Rachna Asthana, out project mentor, asked us to correct the error and as this could result in accidents. My project partner, Sheikh Mujibur Rahman with all innocence on his face explained, "M'am, we kept it purposefully because when girls meet with accidents, boys shall have opportunities to help them: All of us burst into laughter. This is just one example of many such incidents which made learning fun and memorable.

Now, it was time for the final year when we became busy with Seminar, project work campus interview preparation in addition to the regular subjects. Moreover, we were anxious for job, we had mixed feelings about the new life ahead and losing our teachers and friends, who were an inseparable part of our life by the final year.

Dr Rachana Asthana taught us TV Engineering, which helped me when I was working on IPTV project in Alcatel-Lucent, USA, and Dr Trishla Gupta taught us one of the most difficult topics of Fiber Optics/Optical Fiber Communication in the final year.

I still remember that I memorized everything for my seminar, but out of nervousness forgot most of it while delivering it and was very embarrassed.

I am blessed that we are together now through EC95 WhatsApp group created by Amit Bajpai and Pramod Agnihotri and a WhatsApp group, including teachers, created by me. I had a great time at our "Silver Jubilee Reunion" in November 2019 where I met most of my classmates and teachers.

My gratitude to all the teachers for everything. "A teacher plants the seed of knowledge, sprinkles it with love, and gently nourishes its growth to build tomorrow's dream." Thank you for making us able and dutiful global citizens.

- Vinod Kumar

Program Director Ericsson Inc., Plano, Texas, USA

APPENDICES

Chronological Order of Prominent Events

1907	Industrial Conference at Nainital proposed two Technical Institutions at Roorkee for Engineering and at Kanpur for Chemistry. Office of the Industrial Chemist to Govt. of U.P. established in HBTI Campu, Kanpur.
1916-18	Indian Industrial Commission headed by Mr. T. Holland suggested teaching of Chemical Technology, Oil Chemistry & Technology in the institute.
1920"	Government Research Institute, Cawnpore" established near Company Bagh Crossing, Nawabganj, Kanpur and Dr. E. R. Watson was the Principal.
1921	Institute was renamed as Government Technological Institute, Cawnpore.
	General courses on Applied Chemistry, Oil Technology and Paint Technology were started. The foundation for the current building was laid by Sir Spencer Harcourt Butler, Governor of United Provinces of British India. Dr. E.R Watson was appointed as Principal of the Institute. In the institute 06 students were awarded a scholarship of Rs. 75 per month (each).
1922	Students of first batch underwent vocational training in year 1922 at Government Technical School Lucknow.With completion of LuxmanBagh Bungalows near Company Bagh Crossing, Nawabganj, the Institute was relocated in these bungalows.
	Leather Technology was started (Later closed with the creation of a separate Leather Institute at Kanpur in 1933).
1924	The Department of Chemistry was established.First batch of six students passed out.
1926	The Name of the Institute was changed to "HARCOURT BUTLER TECHNOLOGICAL INSTITUTE". Dr. E.R. Watson retired and Dr. Gilbert J. Fowler took over as the Principal.
1928	Initially, Sugar Technology was started (Later Closed with the creation of separate Institute in year 1936 but was housed in the same premises of HBTI till 1963; now known as NSI).
1929	Dr. H. D. H. Drain took over as Principal.
1932	Director of Industries, UP became Ex-officio-Principal. Mr. J.

	A. H. Duke the then Oil expert to Govt. of U.P. and the Head of Oil Technology was appointed as acting Principal.
	Diploma courses renamed as AHBTI and a higher research course called as FHBTI were started.
1937	Sri D.V. Athawale, the then Head of Oil Technology and the Oil Expert took over as the Acting Principal.
1942	Office of the Glass Technologist to Govt. of UP waslocated at HBTI (continued till year 1991).
1947	Dr. D.R. Dhingra, Industrial Chemist to Govt. of U.P. took over as the Acting Principal.
1948	Essential Oil Scheme was introduced.
1953	Central Control Lab of Excise Department of Alcohol's was establishedand Alcohol Technologist to Govt. of UP appointed.
1954	Chemical Engineering Department was formed with two new courses for awarding undergraduate degrees of AHBTI and FHBTI with intake of 50 students. (First in U.P. and second in the country).
1956	New Teaching Staff was sanctioned, Separate faculty position were created (Prior to this teaching was done by the Oil Expert, Industrial Chemist, Research Chemist, Research Assistants). Applied Microbiology Course was started.
1957	Full time Principals' post was revived. Dr. H. Trivedi was the Principal. Two new Engineering courses were started viz. B.Sc. Electrical Engineering and B.Sc. Mechanical Engineering besides B.Sc. ChemicalEngineering.
	Post B.Sc., FiveChemical Technology courses of 3 year duration and Post I.Sc. Engineering Courses of 4 year duration were started.
1958	Two full-fledged undergraduate courses were started leading to degrees in Chemical Engineering after four year study and in Chemical Technology after three years study.
1961	The Department of Mathematics was established.
1962	Dr. C. R. Mitra was appointed as the Principal.
1964	The Department of Plastic Technology, Biochemical Engineering and Food Technology (BEFT), Mechanical Engineering and Electrical Engineering were established. With Intake of 30B.Sc.Chemical Technology degree course of 3-year duration started. Departments started offering Doctoral

Program. The Department were accredited by NBA thrice in 2003, 2008 and 2013 for three years respectively. Association of food scientist and technologist (India) Kanpur chapter is also working in BEFT department.

1965 HBTI was declared autonomous.

M.Sc. (Tech.) Oils, Fats and Waxes and M.Sc.(Tech.) Paints and Varnishes were reconstituted as (M.Sc. Chem. Tech.) Oil Tech. and M.Sc. (Chem. Tech.) Paint Tech.Five new M.Tech. courseswere started namely M.Sc. (Chem. Engg.)Design, M.Sc. (Chem. Engg.) Practice, M.Sc. (Chem. Tech.) Bio-Chem. Engg., M.Sc. (Chem. Tech.) Food Tech. and M.Sc. (Chem. Tech) Plastic Tech.All the PG Courses were of 2 year duration.M.Sc.(Tech.) Applied Microbiology course was closed.Departments were reconstituted. Oil and Paint Technologies were combined Bio-Chemical Engineering and Food Technology were also combined while Plastic Technology; Chemical Engineering, Electrical & MechanicalEngineering remained separate departments.Basic Sciences& Humanities Department was raised to its full status.A Dispensary established. 248.64 Acres of land was planned to be acquired (Presently west campus with an ambition to construct an entirely new Unified Campus including instructional building, hostel and residence.

1966 Department of Civil Engineering was established with an intake of 20 students (for B.Sc. Course of 4 year duration).

1967 Affiliation transferred from Agra University to Kanpur University.

1969 Dr. C. R. Mitra left in April 1969. Dr. D. Mangaraj officiated for 3 months. Dr. R. S. Chaturvedi took over as Director in July 1969 for 2 years.

1971 Dr. Rajendra Prakash joined as Director but left after 2 months.Then Prof. S.K. Guha and Prof. R.S. Srivastava officiated one by one.

1972 Prof. S.D. Shukla became director of the institute in May 1972.

1973 Golden Jubilee of Institute was Celebrated. Building of Electrical Engineering, Civil Engineering Departments, Cafeteria, LV Hostel-Il were completed in the East Campus while WCH-I and residences in the West campus were constructed. A Full time Medical Officer was appointed.

1977 Leather Technology course of 4 year duration post I.Sc.was

started.

1978 Leather Technology department was established.

1979 Admissions were being made through CombinedEntrence Examination (CEE).

1980 Construction of Hostel WCH-Il was completed.

1981 Leather Technology building was completed.

1983 Dr. B. Satyanarayana, Prof. of Civil Engineering took over the charge of Director on the retirement of Dr. S. D. Shukla.Dr. A. K. Vasishtha became Director in December 1983.

1984 The Department of Computer Science & Engg. was established with intake of 30 students (B.Tech. courses in Computer Science of 4-year duration (post I.Sc.).

1985 Chief Guest at Convocation was Shrimati Sushila Rohtagi, Education Minister, Government of India.

1986 Construcion of WCH-III hostel was completed and Semester system was introduced in academic activity of Institute.

1987 In Computer Science Department a 3-year Post Graduate Program i.e.Master of Computer Application (MCA) wasIntroduced.

1988 Science & Technology Enterpreneurship Park (STEP) was Started.

1989 HBTI had conducted Combined Entrence Examination (CEE) in1989, 1990 and1991. Construction of Guest house building was completed.

1990 Electronics Engineering Department was established with intake of 30 students.

1991 3-year post B.Sc. courses in 5 branches of Chemical Technology were converted into 4 year post I.Sc. coursessimilar to the engineering courses.

1992 Construction of Girls Hostel was completed in East campus.

1993 Construction of Hostel LV-III wascompleted in East Campus.

1995 HBTI got autonomy for conducting examinations. 75th year of HBTI was celebrated on 25th November, 1995.

1996 Dr. V. K. Jain took over as Director on the retirement of Dr. A.K. Vasishtha in June, 1996.

1998 Department of Humanities and Social Science was recognised as Ph.D. Research Centre in Economics by C.S.J.M. University

	Kanpur.
2000	B.Tech.Information Technology program was started.
	Affiliation with Kanpur University (CSJMU) had ended. Then admission in HBTI was started from UPTU, Lucknow.
2001	Prof. C.V.S.K Rao (June 2001-Aug 2001), Prof. A.P. Dwivedi (SEP 2001-Oct 2001), Prof. K.P. Singh were appointed as Director of the institute.
	HBTI was brought under the affiliation of UPTU Lucknow in the year 2001.The courses and syllabi were prescribed and approve by the University for department for B.Tech. and MCA students.
2004	Prof. P.N. Maheshwariwas appointed as Director of the Institute.
2005	Prof.R.P. Singh was appointed as Director of the Institute.
2008	Prof S.K.Awasthiwas appointed as Director of the Institute.
	Prof. R.K. Khitoliyawas appointed as Director of the Institute.
2009	HBTI was declared as leading institute among 08 Government Funded Institutionsof UPTU Lucknow.
	Chief Guest Convocation was Dr. P.K. Kalra.
2010	Chief Guest Convocation was Sri Sadal Prasad, Hon'ble State Minister, UP.
2011	Prof. J.S.P. Rai was appointed as Director of the Institute.
2012-13	Declared Best Government Engineering College (affiliated to UPTU) by ABP news.
2013-14	An academic autonomous institute statuts was awarded by Gautam Buddh Technical University (earlier known as UPTU), Lucknow.
2014-15	Prof. M.C. Shukla was appointed as Director of the Institute.
	Prof. A.K. Nagpal was appointed as Director of the Institute.
2015-16	Prof. Ashok Kumar was appointed as Director of the Institute.
2016	Dr. D.B. Shakyawar was appointed as Director of the Institute and HBTIwas declared as Technical University (HBTU) in September 01, 2016.
	Prof. M.Z. Khanwas appointed asthe first Vice Chancellor of the University.
2017	Prof. Vinay Kumar Pathak was appointed as the Vice Chancellor of the University.

2018	Prof. N.B.Singh was appointed as the Vice Chancellor of the University.
2019	Padma Shri Sanjay Govind Dhande, Former Director IIT Kanpur was Chief Guest of HBTU First Convocation held on 07December, 2019.
2020-21	Prof. Anil D Sahasrabuddhe, Chairman AICTE, was Chief Guest of HBTU Second Convocation 29 January, 2021)
2021	Prof. Samsher was appointed as the Vice Chancellorof the University.

Principals of the Institute

Sl.No.	Principals	Duration
1.	Dr. E.R. Watson	1921-26
2.	Dr. Gilbert JFowler	1926-28
3.	Dr. H.D.H Drain	1929-32
4.	Shri J.A.H. Duke	1932-37
5.	Mr. D.Y. Athawale	1937-47
6.	Dr. D.R. Dhingra	1947-57
7.	Dr. H. Trivedi	1957-62
8.	Dr. C.R. Mitra	1962-69

Directors of the Institute

Sl.No.	Directors	Duration
1.	Dr. D. Mangaraj	1969-69
2.	Prof. R.S Chaturvedi	1969-71
3.	Dr. Rajendra Prakash	1971-71
4.	Dr. S.K Guha	1971-71
5.	Prof. R.C. Srivastava	1971-72
6.	Prof. S.D Shukla	1972-83
7.	Prof. B. Satyanarayna	1983-83
8.	Prof. A.K. Vasishtha	1983-96
9.	Prof. V.K. Jain	1996-2001
10.	Prof. C.V.S.K. Rao	2001-2001
11.	Prof. A.P. Dwivedi	2001-2001
12.	Prof. K.P. Singh	2001-04
13.	Prof. P.N. Maheshwari	2004-05
14.	Prof. R.P. Singh	2005-08
15.	Prof. S.K. Awasthi	2008-08
16.	Prof R.K. Khitoliya	2008-11
17.	Prof. J.S.P. Rai	2011-13
18.	Prof. M.C. Shukla	2014-14

Vice Chancellors of the University

Sl.No.	Name	Duration
1.	Prof. M.Z. Khan	2016-17
2.	Prof. Vinay Kumar Pathak	2017-18
3.	Prof N.B. Singh	2018-21
4.	Prof. Samsher	2021- till date

Pro-Vice Chancellors of the University

Sl.No.	Name	Duration
1.	Prof.Karunakar Singh	2018-19
2.	Prof. Manoj Kumar Shukla	2019-21

Deans of School of Basic & Applied Sciences of the University

Sl.No.	Name	Duration
1.	Prof. S.U. Siddiqui	2016-18
2.	Prof. Rekha Bali	2018-20
3.	Prof. Ram Autar	2020-till date

Deans of School of Chemical Technology of the University

Sl.No.	Name	Duration
1.	Prof.Karunakar Singh	2016-18
2.	Prof.Deepak Srivastava	2018-20
3.	Prof. Alak Kumar Singh	2020-till date

Deans of School of Engineering of the University

Sl.No.	Name	Duration
1.	Prof. Sunil Kumar	2016-18
2.	Prof. Rajive Gupta	2018-20
3.	Prof. S.K. Singhal	2020-till date

Deans of School of Humanities & Social Sciences of the University

Sl.No.	Name	Duration
1.	Prof.K.M.Mohapatra	2016-18
2.	Prof. R.K. Shukla	2018-20
3.	Prof. Deepak Srivastava	2020-till date

Controller of Examinations of the Institute

Sl.No.	Name	Duration
1.	Prof. Onkar Singh	2008-09
2.	Prof. D.K. Singh	2009-11
3.	Prof. Raghuraj Singh	2011-14
4.	Prof. Pramod Kumar	2015-16

Controller of Examinations of the University

Sl.No.	Name	Duration
1.	Prof. Pramod Kumar	2016-19
2.	Prof. Pradeep Kumar	2019-till date

Registrars of the University

Sl.No.	Name	Duration
1.	Mr. Shatrughna Singh	2016-17
2.	Prof. Karunakar Singh	2017-18
3.	Prof. Manoj Kumar Shukla	2018-19
4.	Dr. Sudheer Kumar Sharma	2019-19
5.	Prof. Neeraj Kumar Singh	2019-till date

Finance Controllers of the University

Sl.No.	Name	Duration
1.	Mr. Rajesh Singh	2016-21
2.	Prof. Ram Naresh	2021-21
3.	Mr.Ajay Jauhari	2021-till date

Finance & Account Officers of the University

Sl.No.	Name	Duration
1.	Mr. Pradeep Kumar	2016-17
2.	Mrs. Rita Sachan	2017-19
3.	Mrs. (Dr.) Aishwarya	2019-till date

Deans of Students Welfare of the Institute

Sl.No.	Name	Duration
1.	Dr.N.P. Shukla	1985 -86
2.	Dr. S.N. Tripathi	1986 -88
3.	Dr. D.N. Saxena	1988 -90
4.	Dr. S.J. Pande	1990 -91
5.	Dr. S.N. Tripathi	1992 -94
6.	Prof. K.K. Tripathi	1994 -97
7.	Prof. K.A. Mishra	2008 -10
8.	Prof. Pramod Kumar	2010 -12
9.	Prof.D.K.Singh	2012 -14
10.	Prof. S.K. Upadhyay	2014 -15
11.	Prof. Karunakar Singh	2015 -16

Deans of Students Welfare of the University

Sl.No.	Name	Duration
1.	Prof. Karunakar Singh	2016-16
2.	Prof. R.K. Shukla	2016-17
3.	Prof. Ram Naresh	2017-19
4.	Prof.Sunil Kumar	2019-19
5.	Prof. Ram Naresh	2019-21
6.	Prof. Sunil Kumar	2021-till date

Deans of Academic Affairs of the Institute

Sl.No.	Name	Duration
1.	Sri K.P. Singh	1984-85
2.	Dr. B. Satyanarayana	1988-90
3.	Dr. P.N. Tandon	1990-91
4.	Dr. C.V.S.K. Rao	1993-97
5.	Prof. Onkar Singh	2009-10
6.	Prof. Sunil Kumar	2010-11
7.	Prof. Pramod Kumar	2011-12
8.	Prof. D.L. Parmar	2012-14
9.	Prof. P.K. Kamani	2014-16

Deans of Academic Affairs of the University

Sl.No.	Name	Duration
1.	Prof. D.Parmar	2016-17
2.	Prof. Anand Kumar	2017-19
3.	Prof. Sunil Kumar	2019-21
4.	Prof. Anand Kumar	2021-till date

Chief Guest of Convocations of HBTI

Year	Name
1984	Shri Narendra Singh Planning Minister, UP
1985	Shrimati Sushila Rohtagi Education Minister ,Government of India
1988	Shri L.P. Shahi Union Minister, Government of India
1989	Shri Mulayam Singh Yadav Chief Minister, UP
1994	Shri Brijendra Sahay Chief Secretary, UP
1996	Dr. Narendra Kumar Singh Gaur Minister,T echnical Education, UP
1997	Prof. B.K. Singh Vice Chancellor, Kanpur University
1998	Dr. Narendra Kumar Singh Gaur Minister, Education and Technology, UP
1999	Smt. Prabha Dwivedi, Minister,T echnical Education, UP
2009	Prof. P.K. Kalra IIT Kanpur
2010	Sri Sadal Prasad Minister, Technical Education, UP

Chief Guest of Convocations of HBTU

Convocation	Name
1st Convocation (07th December, 2019)	Padma Shri Sanjay Govind Dhande, former Director, IITK
2ndConvocation (29th January, 2021)	Prof. Anil D. Sahasrabuddhe Chairman, AICTE

Prof. R. P. Singh
Founder President
Alumni Association HBTI Kanpur

MESSAGE

Dear fellow Harcourtians & Dignitaries

I feel honoured that almighty inspired me to create a valuable forum for our pass out as well as budding and loving harcourtians. This created a beautiful network and as on date we have data base of roughly six thousand pass out harcourtians in various branches running in the institute at U.G., P.G. level as well as research program. The very purpose of this body was to help the alma meter by way of assisting in teaching by the industrial experts, academicians from institute of higher learners, getting good jobs, helping them in their professional and communication skills. We remain indebted to the institute which has built career of each one of us. At the same time the institute provided space for our alumni office which is being maintained by HBTI, Alumni Association. It conducts the following valuable programs for the budding engineers and Technologists.

Mentoring of students for their professional development giving them hand on experience in industry, arranging various workshops, getting them suitably placed etc. Further, students are being awarded scholarship in all the branches by alumni Association. We feel elated to be part of Harcourt Butler Technical University, Kanpur formerly none as Harcourt Butler Technological Institute, Kanpur. It is a matter of more privilege and honor that amongst the top dignitaries, His Excellency, The President of India, Her Excellency the Governor of Uttar Pradesh and Honorable Chief Minister of Uttar Pradesh are going to inaugurate the centennial celebrations and seventeenth international alumni meet.

In three days celebrations many harcourtians will meet after decades of passing out and shall feel nostalgic about their stay at the institute. Some of the alumni who have rendered remarkable services to the nation shall be awarded as Life Time Achievers, Distinguished Alumni and Young Achievers. My congratulation to the awardees in the different categories.

I would like to request the alumni present on this occasion to request the government by sending formal proposal for declaring it a heritage building and giving it national status. That would ensure students to be enrolled from all our the country. It would open new frontiers for the students, the multiplicity of culture, language and human values from the different constituents of diverse Indian culture.

- Rajender Pal Singh

Shri Harendra Agarwal

Founder President

Alumni Association HBTI Kanpur

MESSAGE

I am delighted to note that the Alumni Association HBTI Kanpur and HBTU Kanpur are organizing the Seventeenth International Alumni Meet - 2021 and Centenary Celebrations. The continuity of the rich tradition of organizing alumni meet every year is commendable and I compliment all concerned for taking pains to maintain this tradition.

The completion of 100 years of age by Harcourt Butler Technical University Kanpur is a momentous occasion for all associated with it. As an old student of this legendary institution, I feel utmost proud in being one of its permanent stakeholders and of my little bit inputs in setting up of Alumni Association and transformational journey of the erstwhile Harcourt Butler Technological Institute (HBTI) to Harcourt Butler Technical University (HBTU) Kanpur.

HBTI has gradually moved on from an affiliated institution to an autonomous institution and finally to non-affiliating University. Congratulations to all teachers, alumni, and staff for reaching upto this point. But, the changing scenario of technical education in the country calls for rigorous efforts from all concerned for achieving excellence in technical education, research, and innovation. I feel that the institution has to devise a strategic road map for realizing its vision of achieving excellence by imparting knowledge to develop analytical ability in science and technology to serve the industry and society at large. The students need to be empowered with conceptual, technical, and managerial skills to transform the organization and society while inculcating entrepreneurial philosophy and innovative thinking to cater the social responsibility. Last but not the least, my alma mater must strive hard to serve people, society, the nation, and the world with the utmost professionalism, values, and ethics to improve the quality of life and make developments sustainable.

I am sure that this Alumni Meet and Centenary Celebrations shall allow all pass-out students to come to the institution and cherish their memories with old-time friends, faculty, staff members, and students of the Institution. It shall also be the time when alumni shall look at the overall state of the Institution and deliberate upon various aspects for its' further improvement.

I extend my best wishes for the successful conduction of **17th International Alumni Meet – 2021 and Centenary Celebrations**at HBTU Kanpur. P

- Shri Harendra Agarwal

Prof. (Dr.) Onkar Singh

Founder Secretary Alumni Association

Immediate Past President & Founder Secretary,

Alumni Association,HBTI Kanpur

[B.Tech.-Mechanical Engineering with Distinction during 1985-1989 from Harcourt Butler Technological Institute, Kanpur (U.P.), INDIA]

MESSAGE

Congratulations on being an alumnus of the institution that has completed 100 years of its relentless service to society since its inception on 25th November 1921. It is a matter of pride and fortune to witness the alma mater completing its centenary of existence in technical education in the country.

As the founder Secretary and immediate past President of the Alumni Association, it is heartening to note that the practice of holding the annual Alumni Meet has been maintained and the 17th International Alumni Meet is being held. I hope that this being the third Alumni Meet since the commencement of Centenary Celebrations in November 2019, will witness the launching of ample initiatives for the betterment of the alma mater as part of its Centenary Celebrations which are supposed to continue till 2022.

Further, in view of being a senior faculty member of Harcourt Butler Technical University, Kanpur and having served technical education of U.P. state in all capacities of Lecturer, Assistant Professor, Professor, Head of Department, Controller of Examination, Dean, Vice-Chancellor, etc. I keenly desire qualitative improvement in the teaching-learning-evaluation processes in HBTU in particular and all technical education institutions in general.

In the specific context of HBTU, I perceive that the institution has already lost its golden opportunity of remodeling itself in a new format immediately after its upgradation from HBTI to HBTU on 1st September 2016. But, it is never late if the institutional governance keenly desires to improve upon and is facilitated by the regulatory framework for the same.

The quality of admitting students being the key influencer upon the overall quality of the graduating students needs immediate attention. Therefore, firstly, I wish that all concerted efforts are made to attract the high merit students to seek admission to HBTU. The increase of intake in existing programmes, and the start of new programmes should be thought about only after the requisite faculty, staff, and infrastructure is put in place. Any haste in increasing student strength and number of programmes in the University

without infrastructure, teachers & staff is counterproductive. Rolling out students with poor professional competence brings a bad name to the institution.

The presence of committed and competent faculty and staff is another critical factor that affects the quality of education. The recruitment of faculty and staff of best quality is the second most important initiative that should be carried out with the highest level of integrity, fairness, and transparency.

As regards support system, the availability of uninterrupted internet connectivity, removal of obsolescence in laboratories, up-gradation of IT facilities for teachers, setting up IT infrastructure in classrooms, improving the hostels, improving faculty/staff quarters, speedy & fair administrative disposals, better financial condition, improved overall upkeep of campus, etc. are critical requirements and should be the priority of the institutional governance.

I sincerely wish that the governance of HBTU will be honestly working with utmost commitment, fairness, and integrity to go for holistic improvements in the institution and improve its public perception. The autonomy available with HBTU needs to be exercised consciously, lest the institution will lag in the highly competitive technical education scenario. The availability of nearly 75 acres of land in East Campus, and around 250 acres in West Campus offers the possibility of its growth to any extent. The institution has to cultivate a culture of continuous discourse among its stakeholders on all aspects concerning the University. The top-down approach of governance does not hold the possibility of achieving excellence in academics. The teaching fraternity has to remain committed, motivated, innovative, and communicative enough to ignite younger minds for achieving excellence in their pursuits. Research and development activities enrich the ambience of the institution, so special attention is required for promoting such activities through a helpful administrative setup. Any complacency in the teachers, officers, and staff will result in vitiating the academic and research ambience of the institution, so these should be handled with a high level of emotional quotient and prudence.

I close with the humble desire of HBTU to become the most sought-after higher education centre through the accomplishments of its students, teacher, alumni, officers, and staff members.

With best wishes to the Alumni Association and Harcourt Butler Technical University Kanpur for the successful conduction of the event.

Jai Hind!

Prof. (Dr.) Onkar Singh

Shri Munish Kumar Jain

Founder Member & Former President
Alumni Association HBTI Kanpur

'74 Mech ,DMM(Materials Management) &

Sr Mgt Navigator Course IMD,
Lussane,Switzerland

MESSAGE

Admission to premium & heritage institute HBTU defines it self that the guy is intelligent & above average also should be proud of being Harcourtian.I felt same way when was admitted in 1970.I was not first or second position holder but yes above average & involved in various extra curricular activities which gave good vision to handle,tackle & good common sense which was my success Mantra.

I was involved in students welfare during my 4 year Mech Engg course,got correction in education system when entered in 2nd year since the semester system which was introduced when we were admitted was defective,approached U.P. Govt,explained the problem that either put proper semester system or change it to old one,got it resolved.I was Students Representative (S.R.)in final year 1973-74.

During those days job situation was not very good & worked as Apprentice under Govt. Scheme afterwards joined Triveni Engg Works Ltd. in Production,handled erection & commissioning of process equipment,on job learning the process since was Mech Engineer, transferred to Contracts & Materials Management.Those days import was Herculean task & St Steel wire mesh required for Filter equipment were being imported from USA. Accepting challenge & handle difficult situation was hobby.Always wished since those days that will work on import substitution & export the components & equipment from India.

Changed the job in 1996 from Triveni to Svedala India,a Swedish MNC which was acquired by Finnish MNC & co. renamed as Metso India.Global co. gave opportunity to represent Indian capacity & capability,convinced global management to develop India as manufacturing base,transfer technology,proved quality & price advantage to 40-50% over overseas cost,aquired around 80 acres land at RIICO Industrial Area Alwar,installation of plant & machinery done,now at present around 17 Mn Euro worth production going on,around 8 Mn Euro is export.It saved foreign currency & earned foreign currency by export since 2010 & prior to

that thru a small unit of 7 acres at Bawal,Rewari Haryana which started in 1998 & was sold after Alwar big unit started.Even for overseas Mfg Units sourcing of Casting, Forging & Components being done in addition to above.Almost 1000 MT per month Castings are being sourced from Indian Foundries in addition to in house foundry capacity.This was done in competition with China.

With service to society,joined Lions Club Mathura Distt 321C& took positions up to Deputy Distt Governor(Region Chairman), Distt Chairman Campaign Sight First,Three times Melvin Jones Fellow by arranging contributing to LCIF(one of the largest organisation to help needy) more than 3000 Dollars,very few in India."

Worked for resolution of problems of commuters of Agra,Mathura,Kosi Kalyan to Delhi going for service by creating Mathura Delhi Dainik Yatri Association(Regd) & holding position of President.Met Railway Minister,Railway Board Officials & got Intercity Express started between Nizamuddin-Agra Cantt & quite a few train stoppage at Mathura & other locations which helped commuters.

I was superannuated from Metso in 2016 as Vice President after working almost 20 years & quite a few overseas colleagues from USA,Europe,Brazil specially visited for my farewell to recognise my contribution.

The point of narrating this is that even without taking top positions in exams.,applying the common sense,fixing target with vision in sight,determination,continuous approach with tangible results will bring the success in achieving goal.Net working with proper home work has proved.Hard work always pays back,may take little more time.Never dishearten & keep on working with clarity which will bring success definitely.

It is clear example of success of start up & Make In India project which is now very frequently being talked about.

Hope this narration will be useful to young Harcourtians & wish them grand success in their career.Always feel Proud Of Being Harcourtians & Being Bhartiya.

Jai Harcourtians, Jai Bharat.

- Munish Jain

Mr K.M. Agarwal

Founder Member

Past President

Alumni Association HBTI Kanpur

MESSAGE

Dear Fellow Harcourtians,

I am immensely overwhelmed by the fact that our institute is celebrating 100 years of its existence. This privilege of being a century old engineering institution is available only to few institutes. Our centenary celebrations are being graced by the Hon'ble President of India, Shri Ram Nath Kovind on 25th November 2021 which happens to be our founders' day.

HBTI got rechristened as HBTU in the year 2016. It is also '17th International Alumni Meet' coupled with the centenary celebrations. The herculean efforts, of the founding members of the Alumni Association along with the current office bearers, have starting bearing fruits as many new initiatives have been launched in the last 17 years. I take this opportunity to congratulate all the Harcourtians who have been actively involved in converting the association vibrant and taking active part to improve the brand image of HBTU which we all are an integral part. The pleasure of being part of a 100 year old institute is very hard to express in words. We, all are, deeply indebted to our prestigious ALMA Mater which has given shape and formed us to be a technocrats, a perfect human being serving our country in several ways.

Our Alumni Association has taken initiatives like scholarships, carrier counseling , internship for the students studying in the university. The Alumni Association has established a rich tradition of conferring 'Distinguished Alumni Award & Lifetime Achievement Award' to such Alumni who have brought laurels to the ALMA Mater by their exemplary vision and accomplishment in the areas of Industrial, Social Service, Education and Philanthropy.

I appeal all the Alumni throughout the world to come forward and strengthen our ALMA Mater specifically in uncharted subjects. The focus should shift towards artificial intelligence, environment protection, conservation of energy to ensure that we handover a livable planet to our successors.

I am very happy to share that during pandemic our Harcourtians have stood in support of the fellow Harcourtians and society as a whole and provided much needed support in the times of distress. I salute them all and sincerely hope that the Alumni fraternity will get stronger by the year and will help the fellow Harcourtians in achieving greater heights & provide support when needed.

I would like to give you a strong message the current executive committee:

CONTACT EVERY HARCOURTIAN wherever they are located on the globe.

Long Live H.B.T.U and its Alumni Association.

Jai Harcourtians, Jai Hind !

- K.M. Agarwal

Mr Vivek Mishra
Founder Member
Hon Secretary
Alumni Association HBTI Kanpur

MESSAGE

On the occasion of the Centenary of our magnanimous Alma mater, "Harcourt Butler Technical University, Kanpur ", I am honored to have got the opportunity of putting in some tangible efforts. For H.B.T.U., it has been a journey of nurturing technical creativity, administrative prowess, social objectiveness and human values. Where raw talent develops wings to fly and conquer unchartered frontiers; research and development work is carried out in a congenial atmosphere. The birthplace of significantly important institutions of research and learning.

The task of preparing a “History Book” was entrusted to a team of enthusiasts from the H.B.T.U. fraternity including the Faculty Members, Alumni and students. Patronage and coordination of our Hon Vice Chancellor had been a continuous and relentless source of inspiration. It has been both a privilege and an opportunity for us and most sincere efforts have been put in to complete the task with honors. Collection of information and putting it in perspective to paint the centennial journey has not been easy. The “History Book Group” needs to be complimented for their dedication and perseverance.

I request the galaxy of Harcourtian's with diverse area of expertise to join the mainstream of cooperation with the university. It would help in exchange of knowledge, the domain of research and development projects, internships, training and placement of the students. It would also help to explore new avenues of disseminating resources generated by our fraternity for national interest, to honor our Alma mater by way of cooperation would be the best we can do as an alumni on this memorable occasion.

Jai Hind, Jai Bharat and long live H.B.T.U. Kanpur.

- Mr Vivek Mishra

Prof. (Dr.) Raghuraj Singh
FProfessor, Computer Science & Engg. Dept.
Dean, Planning and Resource Generation
Founder Member, Alumni Association,
HBTI/HBTU Kanpur

MESSAGE

It was a festive occasion at my home when I got admission in July 1986 in the B. Tech. Computer Science & Engineering programme of one of the most sought Engineering and Technology Institution of the country, the Harcourt Butler Technological Institute, popularly known as HBTI, Kanpur. The second happiest moment of my life came in November 1998, when I joined HBTI, Kanpur as Associate Professor in the same department from where I graduated. Today, once again I feel overwhelmed on being an alumnus as well as a Professor of the institution that has completed 100 years of its service to the Nation and society.

I feel privileged and fortunate to be associated with my alma mater for the last 35 relentless years in various capacities like student, Associate Professor, Professor, Head of Department, Dean of Planning & Resource Generation, Dean of Continuing Education & Internal Quality Assurance, Registrar, Controller of Examination, Coordinator of various Projects including TEQIP-III, Associate Dean of Students Welfare, Chief Proctor, warden and witness its centenary celebration on November 25, 2021. I have seen many ups and downs in the glory of the Institution during my long association but enjoyed a fantastic overall experience.

It gives me immense pleasure to note that my initiative of holding International Alumni Meet in 2005 in the capacity of the founder Convener is continued without any break and the Alumni Association is holding 17th International Alumni Meet on this great occasion. I am sure that the Alumni Association will continue this tradition in future also and ensure its untiring and fruitful contribution for the betterment of its alma mater.

Although status of the Institution has been upgraded to a State University in September 2016 but still I feel pained to see its diminishing glory especially in the recent 5-10 years. I sincerely urge upon the present governance to work with honest and utmost sincere commitment for the qualitative improvement in various aspects like teaching-learning, adaptation of the true University framework/format, quality of admitting students, increase in intake in the existing programmes, closing of some non-popular programmes, starting new popular and cutting edge technology programmes, research and development activities, selection and

recruitment of quality faculty and staff, IT infrastructure and necessary equipments in laboratories and classrooms, hostels, faculty/staff quarters, administrative procedures, financial resources, overall ambience and upkeep of the campus, fruitful alumni and industry interaction, motivating faculty & staff etc.

I am sure that with the sincere, dedicated and coherent efforts of all of us will not let the glory of the Institution down and HBTU will remain the most sought after technical Institution of the country. At the last, I congratulate each of us on this great occasion and wish that the centenary celebrations will pave way for the excellent achievements by the Institution.

Prof. (Dr.) Raghuraj Singh

MESSAGE FROM
Dr Vinay Kumar Pathak
Founder Member
Alumni Association HBTI Kanpu

Prof. Alak Kumar Singh
Founder Member
Alumni Association HBTI Kanpur

MESSAGE

अत्यन्त हर्ष का विषय है कि हरकोर्ट बटलर प्रौद्योगिकी संस्थान कानपुर (वर्तमान में हरकोर्ट बटलर प्राविधिक विश्वविद्यालय) अपनी स्थापना के 100 वर्ष पूर्ण कर स्वर्णिम इतिहास का निर्माण कर रहा है। शताब्दी वर्ष किसी भी विश्वविद्यालय के लिए अत्यन्त गौरव का विषय होता है।

शताब्दी दिवस कार्यक्रम भारत के महामहिम राष्ट्रपति महोदय की गरिमामयी उपस्थिति में आयोजित होना इस विश्वविद्यालय के लिए एक महान उपलब्धि भी है। इस संस्थान/विश्वविद्यालय की एक महान विरासत, परम्परा एवं गौरवशाली अतीत है, जिसने इसे उत्तर भारत के शीर्ष संस्थानों में से एक के रूप में स्थापित किया । इसका सम्पूर्ण विश्व में मजबूत एलुमिनी नेटवर्क है, जो अपने प्रभाव क्षेत्र में विरासत, संस्कृति से इस महान संस्था के उत्कृष्ट कार्यों को आगे बढ़ा रहे हैं। संस्थान/विश्वविद्यालय के छात्रों, शिक्षकों तथा पूर्व छात्रों ने अपने प्रौद्योगिकी योगदान से देश ही नही अपितु विदेशों में भी इसकी गरिमा को बढ़ाया है।

इस पावन अवसर पर आयोजक गणों, विश्वविद्यालय परिवार के समस्त सदस्यों एवं पूर्व छात्रों को मेरी ओर से कोटि कोटि बधाईयाँ।

- Alak Kumar Singh

Dr. Praveen Kumar Singh Yadav
Founder Member
Alumni Association HBTI Kanpur

MESSAGE

Dear Alumni & Friends,

I feel honoured to be the alumnus of Harcourt Butler Technical University, Kanpur (Erstwhile Harcourt Butler Technological Institute, Kanpur). It is indeed a great pleasure for me to be one among the founder members of the alumni association.

'Coming together is a start; being together is the success', I am so happy that after determined, persistent efforts from the team, we have come out with a truly wonderful alumni network. Our alumni are active contributors to their professions and to their communities around the globe.

I would like to take this opportunity to thank all of you who helped making this Centenary Year Celebrations a grand event and generously contributed for organizing number of alumni events.

As we progress through 2021 and beyond, I wish all Harcourtians' to look up, strive to achieve new heights, reach out to your peers and mentors and thank them for their support and friendship.

Thank you for always being the best that you can be ….

Respectfully and *Forever a Harcourtian*

With Best Regards

Dr. Praveen Kumar Singh Yadav

MEMORANDUM OF ASSOCIATION

1. Name of Association : The name of this association shall be Alumni Association Harcourt Butler Technological Institute,Kanpur. Its short title shall be ALUMNI-HBTI.
The emblem of the Harcourt Butler Technological Institute,Kanpur (herein referred to as the Institute) with the incorporation of abbreviated name, viz., HBTI-ALUMNI, shall be the association's emblem. Colour of logo will be printing in blue on white base.

2.Address of Association : HBTI, Kanpur-208002

3.Purpose of Association : Only one Chapter shall be set up in any town or area by locally resident Active Members for increasing contact amongst the members and furthering the aim of the Association

4.Objects of Association :

(i) To provide a forum to establish a link between the alumni,staff and students of the Institute
(ii) To enable the alumni to participate in activities which would contribute to the general development of the Institute
(iii) To keep the alumni abreast of scientific and technological developments of national and internation importance
(iv) To help the alumni with their technical problems
(v) To institute prizes and scholarships, and render financial aid to deserving students of the Institute
(vi) To contribute towards the welfare of the alumni
(vii) To To promote networking amongst alumni.
(viii) To further such other aims as the General Body may decide from time to time.

5.Name, address,post and occupation of members of association.

S.N.	NAME	ADDRESS	POST	OCCUPATION
1.	Harendra Agarwal s/o Late B.Das	C-358,Lohiya Nagar Ghaziabad(U.P.)	President	Educationist, Social worker Business & Consultant
2.	V.K.Grover s/o Late L.N.Grover	C-367,Vikaspuri,New Delhi	Vice-President	Service
3.	Onkar Singh s/o Dr.G.S.Yadav	Type-IV-T-51,West Campus, H.B.T.I., Kanpur	Secretary	Service

4.	K.M.Agarwal s/o Sri Harish Chardra	D-235,Vivek Vihar, New Delhi.	Jt.Secretary	Service
5.	Raghuraj Singh s/o Sh. Babco Singh	Type-IV-D-8,West Campus, H.B.T.I., Kanpur	Treasurer	Service
6.	R.P.Sing s/o Late S. Joginder Singh	Bungalow No. 7 Laxman Bagh, Officers Colony, Nawabganj, Kanpur	Member	Service
7.	Munish Kumar Jain s/o Late Kunwar Bahadur Jain	G.M.,Metso Minerals Ltd. 6th Floor,DLF Gateway Tower, DLF City, PhaseIII.Gurgaon	Member	Service
8.	Praween Kumar Singh s/o Shri A.S. Yadav	H.No. 1421/23 Y Block Kidwai Nagar, Kanpur	Member	Service
9.	Vinay Kumar Pathak s/o Sri Ram Ankit Pathak	Professor Computer Science Deptt.,HBTI,Kanpur	Member	Service
10.	Vivek Mishra s/o Sh. Gyan Mishra	8/87,Shri Ram Krishna Pragya Bhawan, Arya Nagar,Kanpur	Member	Service
11.	Alok Kumar Singh s/o Jawahar Singh	Type IV/ D-44 West Campus HBTI Colony, Kanpur-208 002	Member	Service

6. We the above mentioned founder members of assocation, do hereby, wish to register our proposed assocation under the provisions of Society Registration Act.

1. Harendra Agarwal
2. V.K.Grover
3. Onkar Singh
4. K.M.Agarwal

5. Raghuraj Singh

6. R.P.Singh

7. Munish Kumar Jain

8. Praveen Kumar Singh

9. Vinay Kumar Pathak

10. Vivek Mishra

11. Alok Kumar Singh

Dated:
Place:Kanpur

ARTICLES OF ASSOCIATION

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2.Address of Association : HBTI, Kanpur-208002

3.Purpose of Association : Only one Chapter shall be set up in any town or area by locally resident Active Members for increasing contact amongst the members and furthering the aim of the Association

4.Membership of Association:

(i) Life Member:- The life membership fee for the Active members of the Association shall be Rs.1000/-
(ii) Membership of the chapter shall be open to all members resident in the designated areas of the chapter
(iii) Each chapter must have a minimum, membership of 10 active members

5.Accreditation:-

(i) A chapter shall be accredited on fulfilling the membership requirements at 2(above) and on an affirmation that it shall abide by the constitution and by-laws of the Association as may be force from time to time
(ii) Accreditation shall be granted by the Executive Committee for a period of 2 years at a time. Renewal of accreditation shall be subjected to the Chapter having functioned in accordance with the constitution and by-laws of the association.

6.General Body:-

(i) The General Body of the Association shall consist of all the members of the association
(ii) The General Body shall meet, at least once in a year at a time and place in accordance with the recommendation of the by-laws committee.
(iii) The quorum for the General Body Meeting shall be thirty active members. For those general body meeting which are to consider any constitutional change, the quorum shall be forty five active members.
(iv) At the Annual General Body Meeting the Secretary shall present the Annual Report of the activities of the association and the Treasurer shall submit the financial and audit reports.

7.**Executive Committee:-**

The Executive Committee consisting of the following shall be in over-all charge of the Association;

President:

The President shall be an alumnus/alumna of at least ten years standing. He/She shall preside over the Executive Committee and General Body Meetings.

Vice-President:

The vice president shall be an alumnus/alumna of at least ten years standing. He/She shall discharge the duties of the President during his/her absence.

Secretary:

The secretary shall be an alumnus/alumna of at least eight years standing. He/She shall look over after the day to day affairs of the association. He/she shall convene meeting of the executive committee and shall be responsible for execution of decision taken by the committee and general body meetings.

Treasurer:

The treasurer shall be an alumnus/alumna of at least five years standing. He/She shall responsible for the financial affairs of the association . He/she shall be in charge of the payments of bills passed by the Secretary. He/she shall make all the records available for scrutiny to the auditor.

Members:

There shall be seven Members in executive committee. The members shall be alumni of the Institute.

Elections:

(i) all active members of the association shall have the right to vote, propose, second or be a candidate for the elected positions of the executive committee.

(ii) Election shall be conducted by the out going executive committee in the Annual General Body Meeting

Term:

The term of the executive committee shall be for two years. The out going executive shall hand over charge to the incoming executive within the fifteen days of the elections.

Affairs:

(i) The affairs of the association shall be managed by the executive committee.

(ii) The quorum for any executive committee meeting shall be five voting members

(iii) Any five members of executive committee can requisition a meeting of the committee by sending written request to the secretary.

(iv) The executive committee may have special invites for any specific purpose. Special invitees shall be invited to the meeting of the executive committee but shall have no voting rights.

(v) The immediate past president and secretary shall be ex-officio members of the executive committee. All past president and secretaries shall be permanent invites.

(vi) The Executive committee shall have the power to incur expenditure necessary to achieve the aims and objectives of the association.

(vii) In the event of a member of the executive committee resigning or not being available for the rest of the term, the other members of the committee shall appoint another members. The members so appointed shall hold office with full duties and privileges.

(viii) The date, time and venue of the annual general body meeting shall be announced to its members at least one month in advance.

8.News Letters and Programme

The association shall publish the periodical news letter (quarterly) and organize programmes, conferences and seminars to attain the aims and objectives of association

9.Chapters:

(i) Existing chapter will continue to function as Satellite Chapter of Association

(ii) The Alumni residing in any particular place may form a local chapter of the association with a prior approval of the executive committee of the association

(iii) Each chapter may evolve its own organizational structure within the framework of the constitution of the association.

(iv) Each chapter shall submit an annual activities report to the executive committee of the association.

10.Funds

(i) Funds raised from fee, donations, subscription etc. shall constitute the receipt of the association

(ii) The funds of the association shall be invested in such bank(s) as decided by the executive committee and shall be operated jointly by the treasurer and secretary/president.

(iii) The account of the association shall be subjected to annual audit by the chartered accountant as approved by the general body of the association.

11.Amendments

(i) Suggestion for amendment of the constitution signed by at least ten active members shall reach the secretary in writing at least three months prior to the annual general body meeting.

(ii) The secretary shall circulate these suggestions to all the members at least one month before the annual general body meeting, where the amendments are to be discussed.

(iii) No amendment of the constitution or its by-laws shall be made except by the vote of at least two-third of the active members present.

12.Patron

The director of the Harcourt Butler Technological Institute,Kanpur shall be the ex-officio Patron of the association.

(i) Person who have received degree(s) awared by the Institute, herein referred to as the Alumni, as members and those who have paid the membership fee as defined as *active members*

(ii) The Professor, training and placement of the Institute, as *Special Invitee*

(iii) The students of the final year of graduation in the Institute as *Student Member*

Such persons to be decided by the Executive Committee, who may be of help in attaining the objectives of Association as *Special Invitee* for a period of one year.

13.Membership Rights

All active members shall be entitled to receive copies of all announcements and publications of the association and shll be eligible to be beneficiaries of any scheme or assistance administered by the association.

14.Liabilities

No member or any employee of the association shall be personally liable for the debts, liabilities or obligation of the association incurred by his activities on behalf of the association. This shall not be in respect of such action in which he is finally adjudged by the suit or proceedings to have been derected in the performance of his duty on behalf of the association nor in respect of action resulting from willful disobedience of the law, bad faith or gross negligence.

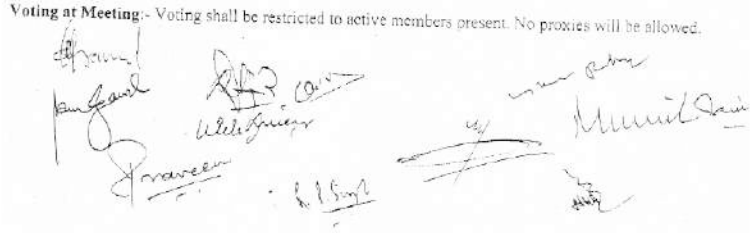
15.Meetings

Place:- Annual General Body Meetings of the Association shall be held at HBTI Campus,Kanpur unless otherwise decided by the executive committee of the association.

Time:- The date and time of annual general body meeting shall be notified by the Secretary as decided upon by the executive committee.

Special Meetings:- Special meetings of the general body to consider specified business may be called by the President. Such meetings may also be required by at lenst 50 active members by written request to the Secretary and requests shoul dbe made at least 60 days in advance of the proposed date of the special general body meeting. The business of spfecial meeting shall be confined to the specific matter for which it is called and no other matters will be allowed to be raised.

Voting at Meeting:- Voting shall be restricted to active members present. No proxies will be allowed.



16.Election of Executive Committee

Election Officer:- The executive committee shall appoint 90 days in advance of the date of election an Election Officer. The Election Officer shall be responsible for the receipt, scrutiny, acceptance and display of nominations, the acceptance of withdrawals and the actual conduct of the election under the Superintendence of the executive committee.

Nominations:-

(i) Invitation of nomination shall be invited, on prescribed forms by the Secretary, at least two months in advance of the AGBM of alternate years, by the General Circular to all active members/chapter(s).

(ii) Due date of nomination will close one hour after the end of registration on the date of commencement of the AGBM.

(iii) Method of every nomination shall be duly propsed and seconded by active members and written consent of the nominee shall be submitted along with nomination.

(iv) Display of valid nominations shall be displayed at the venue of the AGBM.

(v) Withdrawal of nominations may be withdrawn till 4.00 p.m. on the day of the AGBM.

Voting:-

(i) Voting chall be through secret ballot to be held on the closing date of the AGBM of alternate years.

(ii) Each active member shall be entitled to a single non-transferable vote for each of the four posts of President, Vice-President, Secretary and Treasurer and one vote for each executive committee member.

Eligibility of Re-election:-

No person shall be eligible to be reelected to the same office under the association for more than two consecutive terms.

17.Notification OF Activities

All activities of the association, which are of general interest, shall be conveyed to all active members. However, which chapters exit, notification to the chapter shall deemed to suffice notification to its affiliated members.

18.Fiscal Year

The Association's fiscal year will be April 1 to March 31.

19.Proposal for Amendment to By-Laws

(i) Proposal for amendments to by-laws may be made, as and when necessary by any active members.

(ii) The executive committee is empowered to propose any amendment of these by-laws.

(iii) All such proposed amendments shall be notified to active members within a month of the decision of the executive committee.

BY-LAWS FOR THE CHPATERS OF ALUMNI ASSOCIATION

1.Purpose:-

Only one chapter shall be set up in any town or area by locally resident active members for increasing contacts amongst the members and furthering the aim of the association.

2.Memebrship:-

(i) Membership of the chapter shall be open to all members resident in the designated areas of the chapter.

(ii) Each chapter must have a minimum, membership of 10 active members.

3.Accreditation:-

(i) A chapter shall be accredited on fulfilling the membership requirements at 2(above) and on an affirmation that it shall abide by the constitution and by-laws of the association as may be force from time to time.

(ii) Accreditation shall be granted by the executive committee for a period of 2 years at a time. Renewal of accreditation shall be subjected to the chapter having functioned in accordance with the constitution and by-laws of the association.

4.Annual report:-

Each chapter shall frame its own rules and regulations which shall be consistent with the constitution and by-laws of the association.

5.Rules and Regulations:-

Each chapter shall frame its own rules and regulations which shall be consistent with the constitution and by-laws of the association.

6.Funds:-
All chapter activities shall be financed out of funds raised by sections locally. Executive committee may sanction funds to chapter for specific purpose(s).

7.Liabilities:-
Any liabilities incurred by a chapter shall be solely its own and shall not be binding on the association.

8.Office Bearers:-
Each chapter shall have at least the following three office bearers;

a. President
b. Secretary
c. Treasurer

9.Disputes:-
In case of any disputes, the decision of the Executive Committee of Association shall be final and binding and no recourse shall be taken to a Court of Law.

Shri Jeevan Lal Khanna

Living Legend 1948 Pass out from HBTI

One of the First few Entrepreneurs of HBTI

MESSAGE

I am apass out from HBTI from the 1948 batch. As I am writing this letter i look back at those times with fond and nostalgia. I remember the government used to provide full support and there was no fee at the time. i was doing Chemical engineering with specialization in vegetable ghee and the degree inferred at the time was called associate HBTI.The teachers at the time were also amazing. Later, my son, Raj Kumar Khanna, also had the privilege to study at the esteemed institute. He also opted for Chemical engineering and passed out in 1972, 24 years after me.

HBTU has played a key role in shaping the future of India since the past 100 years. The many alumni that I have come across in my life from the institute have all been famed personalities doing wonders in their respective fields.

I am so happy that my Institute is celebrating 100 years since its inception and i wish all the young minds graduating the institute the best for their future. I am so eager to visit the faculty but owing to my age it is not possible. The fact that an institute that was run in a single building in my time has now turned into a University providing education in all fields of engineering fills me with pride. I pray to god for all future endeavors the university decides to take upon and wish the young students and the devoted teaching staff the best.

- Shri Jeevan Lal Khanna

H.B.T.U. and the Alumni Association HBTI Kanpur express their gratitude to you in having joined the program and to have sent your blessings.

The Amount donated by you shall be utilized for "Alumni Centre of Excellence" which is an initiative dedicated to enrichment of soft skills, human values and patriotism in the students of H.B.T.U. and the society in general.

भारतीय राष्ट्रीय अभियांत्रिकी अकादमी
Indian National Academy of Engineering
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Date: November 12, 2021

MESSAGE

It is my proud privilege to participate in the centenary celebration of Harcourt Butler Technical University (HBTU), Kanpur. My association with HBTU as a student began in 1966 and continued until 1971. The Institute provided me the best stepping stone that was needed to enter into professional life. I am in the profession of teaching and research for the past five decades. Times are changing very fast. Engineering education has to keep pace with the changes. The perception of value is changing; the value of knowing things is decreasing, while the value of using knowledge is increasing. There is more premium on what someone can do rather than on what they know. In the future education scenario, peers and mentors will have to play a bigger role. Soft science will strengthen the hands of hard science. The attributes of the new syllabi will be an entrepreneurial mindset, ethical behaviour, teamwork and leadership, global perspective, interdisciplinary thinking, creativity and design, empathy, and social responsibility.

I am sure HBTU is noticing the changes, and accordingly taking measures to upgrade, not only the contents, but also modus operandi to impart engineering education. I wish my institute all the success in all it's future endeavours.

P Ghosh

(P. Ghosh)

Challenges of Nurturing Future Engineering Graduates

Purnendu Ghosh, PhD, FNAE
Executive Director, Birla
Institute of Scientific Research,
and
Vice President, Indian National Academy of Engineering
(purnendu.ghosh@iitdalumni.com)

Engineering is one of the major professions that has shown humanity the ways to meet its needs. The biggest challenge for the engineering profession has been its integration with human needs. On the one hand, engineers are not limited by technology, and on the other, they are worried about the risks to the environment, health, sustenance, and safety.

Some of the qualities we expect in an engineer are strong analytical skills, creativity, scientific insight, leadership abilities, high ethical standards, dynamism, flexibility, the pursuit of lifelong learning, and dedication to the public cause. To become an engineer, it is a tall order, but to create a good professional is always a tall order. Knowledge will never be complete and the truth is unfathomable. We don't want knowledge frontiers to advance so rapidly that we as a society lag behind. Society needs real-world engineers equipped to forge and deal with the complex interactions across many disciplines. They are expected to foresee and manage unknown and unexpected problems. They are expected to appreciate, more than before, the human dimensions of emerging technology. They are expected to understand global issues and the nuances of working in a culturally diverse space. The industry needs engineers who take pride in designing a thing and manufacturing it. They need to appreciate that these jobs are also interesting as packaging is.

In the world of engineering, technical skills are not enough. Engineers are expected to bridge the gap between innovation and manufacturing. For becoming the best in the world, it is important to know how to work in interdisciplinary teams, how to iterate designs rapidly, how to manufacture sustainably, how to combine art and engineering, and how to address global markets. There is nothing like a frugal nation, as far as expectations are concerned. All like low-cost-high-value products. Only frugal innovation that works on the principles of 'calculated trade-offs' succeeds. The question is - who needs the frugal innovation more – resource-rich or resource-constrained nation?

For educators, the challenge is in preparing engineering students for the real world. The engineering curriculum must reflect the creative nature of engineering. At the undergraduate level, engineering schools are making efforts to ensure that the program is interactive and engaging, with a clear

focus on entrepreneurship and new technical skills. There is an emphasis on the changing roles of educators. The role of a teacher is now expected to be that of a coach and a mentor. Knowledge is available in plenty. Students expect guidance to develop their individual learning programs. Good design is not enough, implementation of the design is equally important. Operation is not sufficient, managerial skills are essential. A multi-disciplinary approach, including a work environment, is important for nurturing future engineers.

The mode of student evaluation needs to broaden and change. The real world of engineering expects the knowledge of social engineering. Industry wants decisive and insightful leaders capable of taking risks. One needs to strengthen self-management skills, and that includes the ability to regulate one's behavior and emotions. Understanding human relationships are as essential as understanding technology. Higher education will need to invest in technology. The emergence of augmented reality devices will transform campuses. Higher education will need to explore new funding models. Funding will be based on the institution's responsibility to its students, and not based on enrolment. If the teachers are not well-equipped, intelligent machines will usurp the jobs of teachers. Exams that emphasize mastery of taught knowledge will no longer be the primary tool for judging students' performance. A trivial curriculum filled only with the immediately relevant will not serve the purpose of future engineering education. One of the challenges of education will be - How do we plan for something we can't predict? The teaching methodology will have to change substantially. Active learning approaches such as group work, design projects, case studies, and application exercises will be adopted more and more. Out-of-class experiences (such as internships, participation in design competitions, active participation in student chapters of professional societies) will be the major influencers of student learning. Another important observation is that “we need to rethink which courses are really necessary and which ones can be reduced in scope or jettisoned to free up time for new material.”

Our problem is that most engineers are taking jobs outside the ambit of engineering; only a few want to work on the shop floor. The problem is not only with the graduates. It is also the lack of availability of challenging jobs in the core engineering sectors. Many, however, believe that engineering graduates must also take on jobs outside of engineering, including jobs in non-profit and government policy areas where we desperately need people who can think clearly and logically and who understand technology. Many observers think that the 'centre of gravity of engineering education must shift. Now is the time for empirical design methods based on experience and practice. The hallmarks of a good engineer, according to some engineering educators, are design thinking and an entrepreneurial mindset.

We all talk of 'interdisciplinary' education. Howard Gardner clarifies

an important point, “I don't think you can do interdisciplinary work unless you've done disciplinary work.” Without discipline one remains barbarian, he argues. And this is one of the big challenges of new education. The curriculum needs greater emphasis on the amalgamation of art, technology, design, and engineering and self-directed learning and creativity. “Humanities and Arts, Sciences, Engineering, and Medicine are branches from the same tree” is the theme of a report. Education has moved from 'integrative traditions' to 'disciplinary silos'. There is a need to return to the integrative model that seeks to bridge the integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education. Some of the rationales for integration are:

(1) It addresses the global challenges and opportunities,

(2) It prepares better graduates for employment and for the engaged citizenry,

(3) It makes learning more engaging and relevant to students,

(4) It addresses the multi-dimensional challenges of our time - material, economic, environmental, social, cultural, technical, political, medical, aesthetic, and moral,

(5) It broadens interdisciplinary experiences to interact with strangers,

(6) It promotes diversity and inclusion,

(7) With better understanding about human history and culture, one can draw from a deeper pool of knowledge in understanding the context of their work and in solving problems, and

(8) It promotes innovative thinking that can lead to significant scientific breakthroughs.

Historical examples have shown that breakthroughs in science have been inspired by analogies provided by the arts. It was generally believed that the more a person knows, the better will be person's life. The perception is now changing; the value of knowing things is decreasing, while the value of using knowledge is increasing. There is more premium on what someone can do rather than on what they know.In the future education scenario, the focus will be on arousing intrinsic motivation. One may know things, but the desire will be who can do things and can generate ideas. Soft science will strengthen the hands of hard science.

The future growth of our nation will continue to be driven by engineering. India recognizes that youth leadership has a crucial role to play as change agents for India's development. Young engineers have to adapt to the changing realities and keep pace with technological evolution. As nation builders, young engineers have to develop multi-faceted skills and

competencies, going beyond their core specialization, including soft skill sets.

One survey found that only 7 percent of engineering graduates are employable. It says, “Profit-hungry managements, lack of skill education, resplendent corruption, focus on rote-learning methods, and shortage of faculty (both in quantity and quality) are the major issues plaguing higher education.” The skills required to become a good engineer and a good manager are different. The requirement of one job is 'focussing', whereas the need of the other job is 'overseeing'. As an engineer one is evaluated based on performance. A manager is evaluated based on group performance. For a manager, what matters most is relationship building and conflict resolving skills. Removing bureaucratic hurdles is one of the major responsibilities of a manager. One way is to learn the game of ethical politics to achieve what you want to achieve. Managers are required to be conversant with the changing norms of their playing turf. The job of a manager is like that of a caretaker. A caretaker takes care of what is in place and tries to make it more efficient. The problem is engineers find it difficult to play in all turfs, ethically or otherwise. An engineer turned manager needs to have the ability to master relationships, communicate effectively, and use assets wisely. Engineers are 'individualistic' by nature. They are required to develop the gelling capacity that is required in group activities if they want to become good managers.

The MIT report lists key challenges engineering education will face in the coming decades. These are:

(1) The alignment between governments and universities in their priorities and vision for engineering education, like purpose of engineering undergraduate education, government regulation and national accreditation, unpredictable nature of higher education funding, and commodification;

(2) The challenge of delivering high-quality, student-centred education to large and diverse student cohorts;

(3) The siloed nature of many engineering schools and universities that inhibits collaboration and cross-disciplinary learning;

(4) Faculty appointment, promotion does not appropriately prioritize and reward teaching excellence;

(5) The quality of education can't be measured merely on the basis of staff-to-student ratios, and graduate employment profiles;

(6) “The scholarly work going on in engineering education is not translated back into the lecture room, it's always theoretical”;

(7) The discipline/department-based structure of many engineering schools and universities are holding back innovation and excellence in engineering education.

The report recognizes the fact that becoming an 'adequate' teacher

and researcher is not easy. Evaluating an 'adequate' researcher is comparatively easy than evaluating an adequate teacher. The report observes: “measuring the impact we have on our students, how much they are learning, is something that we as a community do very badly.” The report further notes: “what determines the reputation of a university continues to research. Unless this changes, it is difficult to see how there will be an extensive change to teaching.”

There are many questions we must ask ourselves, for the meaningful nurturing of future minds:

(1) Are the minds of engineers a combination of opportunity and resources?

(2) Are we cultivating the right kind of engineering mindset?

(3) Do only the academic grades reflect the quality of an engineer?

(4) What is more important for an engineer – insight or precision?

(5) Can a person trained to solve expected problems deal with unexpected problems?

(6) What additional efforts are required to impart practice-based experiential knowledge?

(7) What a general engineering toolkit must contain?

(8) Is there a need for various specialized engineering streams at the undergraduate level?

(9) Shouldn't the practice of industry mentoring be taken more seriously?

(10) Why most engineers don't take as much pride in designing a thing and manufacturing it, as they take pride in packaging it?

One of the purposes of engineering is to serve the people who are drowned in poverty, and also those who are moving out of poverty. The so-called demographic 'bottom of the pyramid' has developed a good sense of expectation. Despite their limited purchasing power, they are demanding customers. It means that low-cost engineering is not enough anymore. The challenge is to earn high volume profit in the lower price market. The challenge is to minimize non-essential costs while maximizing the value the customer gets. An innovation of this kind needs top-down support. A consumer wants the best. Products lacking in safety and quality are bound to get rejected. One of the hallmarks of good engineering design is that it should be affordable. People expect from a low-priced car all the good things that make a car a good car. This kind of expectation tends to push up the bars of engineering excellence. Customer's priorities and demands are most important, and that decides what kind of trade-offs can be made to lower the costs. We need developers of responsible technologies and products. We need

managers to manage things, and at the same time, we need an adequate number of things to manage. One of the biggest responsibilities of engineers and technologists is to keep themselves updated about professional developments and practices.

'Too much is changing too fast' is the sign of time. Products decide the toolboxes. It is difficult to predict what you will need to know after 5 years. Long-term plans are passé. A 'factory' model of education is not fit for the present time. The future is becoming beyond the realm of the 'astrologers'. It is also a fact that there is a great deal of human life that does not change. We would like to retain our identity. At the same time, it is difficult to survive without the aid of collective intelligence. The social endeavor will keep on pushing scientific endeavors. We are very hopeful that engineers will not forget their responsibilities. If they forget it is their doomsday. History recognizes that all progress is not desirable, nor sustainable. Past may not predict the future, but without it, there is no future. The big asset of the future is its past. I wish the impact of the future shocks will be beneficial to mankind, as was the impact of the big bang.

Technology wants what life wants. Technology is facing the dilemma of want and need. Need is limited, want is unlimited. Need is a necessity; it defines the limits of enough. Want is optional; it defines the depth of appetite. We don't know where need ends and want begins. Technology suffers from the constant tension between the 'virtues of more' and the 'necessity of less'. Technology is evolving, because the human mind is evolving. The human mind will decide the limits of technology. The more the human mind expands the space of possibilities, the more will technology grow. The three commandments, as proposed by Jason Pontin for technologists are: (1) Design technologies to swell happiness. Its corollary is: Do not create technologies that might increase suffering and oppression unless you're very sure the technology will be properly regulated. (2) In regulating new technologies, balance costs, and benefits, and work with your fellow citizens, your nation's lawmakers, and the world's diplomats to enact reasonable laws that limit the potential damage of new technology. (3) The best technologies have utility, but also provide fresh scientific insights. Prioritize those. If there is a need to develop a technology, it is developed to meet that need. To develop a technology suitable environment is required. There is always a possibility that one environment is better than the other to develop that particular technology. It simply means, developing a particular technology requires several inputs.

Ethics is an important aspect of any profession. In this context, it is good to remember that, as someone rightly pointed out, “The teachings of Plato, Mill, Kant, Spinoza, Descartes, Nietzsche, Epicurus, Confucius, and others will indeed provide a very solid foundation for the understanding of

ethics. But it is important that ethics courses also deal with the pragmatic issues that confront engineers in the rough-and-tumble, everyday world in which they live and work." Engineers need to change the public image of engineering. They should not remain 'behind the scene', as they have traditionally remained. They should be present wherever they matter. A combination of godlike technology and myopic politics can lead to disaster. We can't leave ourselves at the mercy of market forces. Harari's most interesting prediction: once the most efficient data-processing system, Internet-Of-All-Things, is in place, "Homo sapiens will vanish." Let us not threaten our planet with our success. Sadhguru writes at one place, "We have tremendous tools of science and technology at our disposal… However, if the ability to wield such powerful instruments is not accompanied by a deep sense of compassion, inclusiveness, balance, and maturity, we would be on the brink of a global disaster." At another place, he writes, "Some are suffering their failure, but ironically, many are suffering the consequences of their success. Some are suffering their limitations, but many are their freedom….Everything is in place, but the human being is not in place….You cannot transform the world without transforming the individual….Your joy, your misery, your love, your agony, your bliss, lies in your hands." This he called 'Inner Engineering'.

How about imitating the wonder that was India? Can't we regain that spirit and that confidence? Can't we, a country of 1.4 billion people, get back, literally, to Zero? We can. For that we need to nurture future engineers, as per the demands of the future. I would expect my alma mater to take the lead.

Further Reading

1. P. Ghosh, Engineering vision, technology revolution and optimism.
2. P. Ghosh, Engineering of life and life technologies.
3. P. Ghosh and Baldev Raj (Editors), The mind of an engineer.
4. P. Ghosh (Editor), The mind of an engineer, volume 2.
5. T.K. Ghose and P. Ghosh (Editors), Biotechnology in India I&II, Advances in Biochemical Engineering.

Some Early Distinguished Alumni, HBTU, Kanpur

Sl	Alumn	Description
1	**B. P. Bhargava** Dip.Tech. Oil 1924(I Batch)	Deputy Director General, Ministry of Food and Agriculture, Govt. of India
2	**Om Prakash Gupta** Dip.Tech. Oil 1926	Head of Oil Section & Oil Expert to Govt. of U.P. He was very famous in the Oil Industry throughout the country. When he was accompanying the students on educational tour and contacting the factory for the visit, he was introducing himself on phone saying "I am Om Prakash form Kanpur" only.
3	**K. D. Malviya** Oil Tech. Short Course 1930	Minister of Industries,U.P. and later became Petroleum Minister, Central Govt., New Delhi
4	**N. C. Verma** Dip.Tech. Sugar 1933	Professor of Sugar Technology, National Sugar Instt.(N.S.I.), Kanpur. Deputed as Sugar Expert to United Nations Economic Commission for Africa during 1966-1969.
5	**S. N. Gundurao** AHBTI Sugar Tech. 1934	Director, National Sugar Intt.(NSI), Kanpur during 1956-63 (while it was housed in HBTI). Professor Emeritus, NSI. Technical Advisor to British India Corpn., 1963-65.
6	**S. P. Chandra** AHBTI Sugar Tech. 1934	Director(Sugar Technology), Ministry of Food and Agriculture, Govt. of India
7	**R. B. L. Mathur** AHBTI Sugar Tech. 1934	Deputed to U. N. Industrial Development Organisation, Vienna, Austria. Worked as an Advisor in Fiji Island.

8	**S. V. Nilkantham** AHBTI Gen. Research 1936	Army Officer. Joined Army in 1938. Served in the Middle East during II World War in Marhatta Infantry 1940-43. Chief Inspector Textile & Clothing, Ministry of Defence, Govt. of India, Kanpur.
9	**Kripa Shanker** AHBTI Sugar Tech. 934,Ph.D.(U.S.A)	Chief Technologist and Professor of Sugar Technology, NSI, Kanpur since 1964. Dy. Director of Technical Education, Govt. of U.P. 1954 to 1964.
10	**S. L. Garg** AHBTI Sugar Tech. 1938 and AHBTI Oil Tech. 1940	The first alumni who did two full-time course. M.D., Technico Enterprises, Calcutta. M.D., Kanpur Pesticides & Chemicals, Kanpur. Chairman, Greases & Lubricants. Pioneer in the field of paint driers. (The second was, Ganesh Chandra, AHBTI Gen. Res. 1947 & AHBTI Chem. Engg. 1957, Asstt. Prof. Chemistry Deptt. HBTI)
11	**K. C. Gupta** AHBTI Oil Tech 1943	Head of the Chemistry Deptt., Doon School, Dehradoon.
12	**Satish Bahadur** AHBTI Oil Tech. 1947	Professor in All India Film and Television Institute, Poona
13	**Prem Manohar** Oil Short Course 1947	Member of Parliament (Rajya Sabha). Prop. Solar Chemicals, Fazalganj, Kanpur.
14	**A. S. Khanna** AHBTI Oil Tech 1948	President, Indian Paint Association. Qualified Homeopathic Doctor. First Indian Author of a book on Paints. Awarded Distinguished Alumni Award during the Alumni Meet 2012.

15	**S. C. Pandey** AHBTI Oil Tech 1951, FHBTI 1959	Dy. Director, Small Industries Service Institute, Govt. of India. deputed to Common Wealth Secretariat in London, U.K.
16	**M. C. Joshi** AHBTI Gen. Res. 1953 AHBTI Chem.Engg.1957 FHBTI 1959	Asstt. Alcohol Technologist to Govt. of U.P., HBTI, Kanpur. The only alumni who did three full time courses in HBTI.
17	**Suman T Sabnis** AHBTI Chem.Engg.1956 M. S. 1960 & Ph. D. 1966	Worked in Atomic Energy Commission, Bombay. M.S. (Chem. Engg.) 1960 & Ph. D. 1966 from USA. Research Group Leader in Monsnto Co., Massachusets, USA, since 1966.
18	**P. N. Khanna** BScTech Oil 1961, MSc.Tech.Paint 1962	Worked in Asian Paints, Bombay. Retd. as C. E. O., all Overseas Projects of Asian Paints.
19	**G. N. Tewari** BScTech Oil 1961, MSc.Tech.Paint 1962	Worked in I. C. I., U. K. Responsible for installing the First Electro-deposition Paint Application Plant in India at Tata Motors, Pune.
20	**Sushil Chandra** BScTech Oil 1963, MSc.Tech.Paint 1964	HBTI Captain of two games-Badminton 1962-63 and Volleyball 1963-64.
21	**Vijay C. Govil** B. Sc. (Chem.Engg.)1966	Ind. in Bombay. Married to famous Hindi film actress and TV fame, Tabassum. His younger brother, Arun Govil, played the role of Ram in the Ramanand Sagar's famous TV serial Ramayan.

K.D. Malviya
1930, Oil Technology
Father of Indian
Petroleum Industry

Jeevan Lal Khanna
1948, Paints Technology
One of the Early
Entrepreneurs

Prof Purnendu Ghosh
1969, Biochemical Engg.
Director, B.I.S.R. Jaipur

Prof S.K. Awasthi
1970, Chemical Engg.
Ex. Director HBTI

Dinesh Shahra
1972, Chemical Engg.
Ex CMD - Ruchi Soya
Ruchi Group

Rajendra Kumar Jalan
1974, Chemical Engg.
Vice Chairman Council of
Leather Exports India

Prof. R.P. Singh
1975, Oil Technology
Ex-Director H.B.T.I.

Yogesh Kumar Goel
1975, Plastic Technology
Chairman Euro American
Plastics USA

Dwijendra Mathur
1977, Oil Technology
Director Fiairlabs

Nasib Zureshi
1979, Biochemical Engg.
United States Department
of Agriculture

Dr. Ashutosh Karnatak
1980, Technical Member
(Petroleum & Natural Gas) at
APTEL Tribunal,
Ex CMD Gail India Limited

Prof. Samsher Gautam
1987, Mechanical Engg.
VC HBTU

K. M. Agarwal
1977, Chemical Engg.
Director BC Exports
Shakumbhri Expo-Impo Ltd.

Gyan Prakash
1979, Electrical Engineering
President & CEO Kalpataru
Powar Limited

Lt General Suresh Sharma
1980, Electrical Engineering
Ex-Engineering-in-Chief,
Indian Army (PVSM, AVSM)

Dinesh Agarwal
1990, Computer Science
CEO India Mart

Dr. Vinay Kumar Pathak
1991, Computer Science
Vice Chancellor
CSJM University Kanpur

Balram Upadhyay
1991, Civil Engg.
IPS, IGP & Commissioner of Police
Thiruvananthapuram City

NOTABLE ALUMNI

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Early Games & Sports and Distinguished Sportsmen of HBTU, Kanpur

In 1932 when student strength was sufficient, teams in different games were formed and HBTI started taking part in Inter-College Tournaments of Kanpur.The standard of all games and sports was very high in HBTI. The HBTI teams in various games were winning in many tournaments held in the city at that time. HBTI was reputed in the city in connection with all games and sports.

Even after the separation of Sugar Section from HBTI in 1936 and becoming a separate institute it remained housed in HBTI Building till 1963-64. The hostels of both HBTI & NSI were also common.

The Council of Students' Activities of both institutions was also common. The games and sports, scientific activities and other extra-curricular activities were used to be organized jointly. Students of both the institutions were members of all the teams. **Even annual athletic meet and annual cultural function were common.**

HBTI was also organizing two popular inter collegiate tournaments in Kanpur. One **Moolchand Khanna Badminton Tournament** and the other **Jaipuria Table Tennis Tournament** till 1963-64. All colleges and other educational institutions of the Kanpur City were very anxiously waiting for participating in these two prestigious Badminton and table tennis tournaments.

The compiler of this article was Badminton Captain when he was student of B.Sc. Tech. Final during 1962-63 and was Volley Ball Captain of HBTI when he was student of M. Sc. Tech during 1963-64. He had also participated in the Moolchand Khanna Badminton Tournament during 1962-63.

Some Early Distinguished Alumni in Games & Spotrts and other Exta-curricular activities

Vijay Kumar Garg, B.Sc(Chem.Engg.) 1966 was Captain for Badminton of Agra University and represented Agra University in Inter –University Sports during 1964-65.

Umesh Kumr Misra, M.Sc.(Tech.) Applied Microbiology 1965 was Agra University Gymnastic Champion 1964-65 & 1965-66.He also won All India Inter-University Gymnastic Championship in 1965-66.He had already won All India Inter- University Gymnastic 2nd Championship

in 1964-65.He was Kanpur District Gymnastic Champion in 1964-65 & 1965-66.He was coach of the gymnast of Allahabad who won **Bronze medal for India in Olympic 2012.**

Bal Mukund Sharma, B.Sc(Chem.Engg.) 1965 represented Agra University in Hindi Debate Competition at Inter-University youth Festival.

G. M. Desai, B. Sc. (Chem. Engg.) 1966 and 1967 **(course not completed)** was included in Agra University Cricket team. He also represented U.P. State Cricket team in Ranji Trophy.

Vijay Kumar Gupta, B. Sc. (Elect. Engg.) 1973 was selected in District, State and inter-university Volleyball teams. He also got position in U.P. State Athletic team.

Note: Left ones and any error or omission is regretted.

Presented by : Late Dr. S. Chandra, Retd. Prof. & Head, OPT Deptt., HBTI, Kanpur

Early Alumni Association, "Old Boys' Association", HBTI, Kanpur

The first Alumni Association was founded prior to 1936 in the name of "Old Boys' Association" (O.B.A.), H.B.T.I., Kanpur. Even when Sugar Section was separated from H.B.T.I. in the name of Imperial institute of Sugar Technology during the year 1936, the Old Boys' Association continued to work as joint association of the two institutions because the new institution was remained housed in the same premises till about 1963-64.

When the Sugar Institute was finally named as National Sugar Institute (NSI) after independence, the Joint Old Boys' Association of the two institutions was renamed as "H.B.T.I.& N.S.I. Old Boys' Association" but again continued to work as a Joint Association of the two institutions conducting all activities jointly.

The office bearers of the Joint Association during 1958-59 were as follows :-

PATRONS

1. Rai Bahadur, Gujarmal Modi, Proprietor, Modi Industries, Modinagar.
2. Sh. Krishna Deva, General Manager, Nawabganj Sugar Factory, Gonda
3. Lala Krishan Narain, Managing Director, Ganesh Flour Mills, Kanpur
4. Sh. D.R. Narang, General Manager, Basti Sugar Factory, Basti
5. Lala Dayaram, Managing Director, Burhwal Sugar Mills, Burhwal
6. Sh. D. R. Dani, The Upper Ganges Sugar Mills Ltd., Seohara, Bijnor
7. Sh. S. L. Dadheech, General Manager, Seksaria Biswan Sugar Factory, Sitapur
8. Sh. S. N. Gundu Rao, Director, National Sugar Institute, Kanpur (Ex-Officio)
9. Dr. H. Trivedi, Principal, HBTI, Kanpur (Ex-Officio)

OFFICE BEARERS

1. PRESIDENT — Sh. K. P. Bhargava, Chief Chemist & Factory Manager J. K. Oil Mills, Kanpur

2.	VICE-PRESIDENTS	Sh. O. P. Gupta, Oil Expert to Govt. of U.P., Kanpur, Sh. B. K. Chatterjee, M/s. Dorr Oliver Ltd., Calcutta
3.	SECRETARY	Sh. G. N. Gupta, Officer Incharge, Essential Oil Section, H.B.T.I., Kanpur
4.	EDITOR	Sh. W.R. Damle, Alchol Technologist to Govt. of UP, HBTI, Kanpur
5.	TREASURER	Sh. S.N. Kapoor, Asstt. Professor of Chemical Technology, H.B.T.I, Kanpur
6.	JOINT-SECRETARIES	Sh. V. D. Athawale, Research Assistant, H.B.T.I, Kanpur Sh. Mangal Singh, Daurala Sugar Mills, Daurala.
7.	MEMBERS	Sh. N. C. Verma, Chief Technical Officer, N.S.I, Kanpur, Sh. Rajeshwar Prasad, Chief Chemist, Ganesh Flour Mills, Kanpur, Sh. J. N. Tandon, Malayagiri Sandalwood Oil Distillery, Kanpur Sh. J. P. Shukla, Bio-Chemist, N.S.I., Kanpur
8.	HON. AUDITOR	Sh. B. N. Ganguly, Senior Scientific Officer, D.R.L.M., Knp

ACTIVITIES

All the activities of the OBA were organized jointly for the members of the two institutions, i.e., HBTI & NSI.

1. GAMES & SPORTS :

The tournament committee of the OBA was organizing various outdoor and indoor games and sports through out the year. International Playing card game "Bridge" was very popular among the members and the annual bridge tournament was a special feature.

2. VARIETY ENTERTAINMENTS :

The faculty and staff of both the institutions were participating very actively. The annual stage'Natak' was a special feature of the variety programs. Prior to the construction of the present auditorium, all the cultural activities were carried out on a complete wooden stage in the "Ceremonial Hall" situated in the centre of the old library on the first floor above the present Director's and the committee rooms.

3. PICNIC :

Annual Picnic was being organized regularly.

4. ANNUAL JOURNAL :

Annual Journal was being published by the Association regularly.

Even after shifting of NSI, in its new premises in Kalyanpur, the activities of the OBA were organized jointly.

The Nawabganj locality people were very anxiously looking forward vitnessing all the activities organized by the OBA in HBTI. There was no objection by the HBTI authorities against their unauthorized presence.

It was only in 1971, that it was decided that the joint association be bifurcated and the assets be equally divided. Since then "HBTI Old Boys' Association" and "NSI Old Boys' Association" were two separate bodies bringing added glory to their respective Alma-maters. However, HBTI OLD BOYS' ASSOCIATION could not maintain the status and reputation after late nineteen seventies.

Note : *Any error or omission is regretted.*

Presented by : Late Dr. S. Chandra, Retd. Prof. & Head, OPT Deptt., HBTI, Kanpur

Harcourt Butler Technical University
HBTU, Kanpur

The First of HBTU

1 **First Names of the Institute**

"Government Research Institute, Cawnpore" in **1920**, which was renamed as"Government Technological Institute, United. Provinces, Cawnpore in **1921**, renamed as Harcourt Butler Technological Institute in **1926** and finally as Harcourt Butler Technical University in Sep 2016.

2 **First Courses Started**

1. General Applied Chemical Research later became Chemical Engineering in **1954**.
2. Oil Chemistry & Technology (Oil)

3 **First Diploma Awarded**

"Dip Tech" (PG Diploma) which was renamed as AHBTI (Associate ship of HBTI) in **1932** and remained as PG Diploma. The diploma was awarded by the Institute itself until **1958**.

4 **First Duration of the courses**

3 years

5 **First Eligibility for admission**

B. Sc. (Both Maths and Biology)

6 **First Admission Criteria**

Facing an interview committee consisting of Industrial Chemist to Govt. of U.P. and the Principal of the Institute. Later, on merit basis in the qualifying exam.

7 **First Reservation**

One seat was reserved for a Muslim candidate

8 **First admission Year**

1921 (1921-22 I Year, 1922-23 II Yr and 1923-24 III Year)

9 **First Batch of Students**

SIX (3 in each course) out of **374** appeared for interview for admission -

In Research	In Oil
1. Kaushal Kishore Bhargava	1. Bhagwat Prasad Bhargava
2. Har Sahai Chaturvedi	2. Ishwari Prasad Mathur
3. Raza Hussain Khan	3. Bhagwat Prasad Agarwal

10 First tuition and hostel Fee

None till **1961**. Fee was imposed from 1962

11 **First Scholarship**

Rs.75/- to each student since first batch

12 **First Academic Departments**

TWO : 1. General Applied Chemistry Section

2. Oil Technology Section

13 **First Heads of the Institution**

Dr. E. R. Watson, Principal, 1921-25

Dr. Gilbert J. Fowler, Principal 1926-28

Dr. H. D. H. Drane, Principal 1929-32

Mr. J. A. H. Duke, Acting Principal 1932-37

14 **First Indian Principal**

Sri D. Y. Athawale, Acting Principal 1937-47

15 **First Director**

Dr. C. R. Mitra 1965-69

16 **First Faculty**

1. **Dr. E.R.Watson,** Principal and Head of Gen. Applied Chemistry Section.
2. **Mr. J.A.H. Duke,** Head of Oil Tech Section (later became Oil Expert to Govt. of U.P. & the acting Principal)
3. **Mr. K.C. Mukherjee,** Asstt. Research Chemist (Later became Head of Gen.Applied Chemistry Section and the Industrial Chemist to Govt of U.P).

4. **Dr. N. G. Chaterjee,** Assistant Research Chemist (Later became Head of Oil Tech. Section and the Oil Expert to Govt. of U.P.)

5. **Mr. D.Y. Athawale**, Lecturer, Oil Tech.(Later became Actg. Principal)

17 **First vocational training**

During II Yr (1922-23) at Govt. Technical School, Lucknow.

18 **First Placement of students**

1. M/s Cooper Allen & Co. Ltd., Knp. in 1925 (Salary 250/-pm)

2. M/s Gutaiya Sugar Mills, Kanpur on a salary of **Rs. 300/- p.m. in 1925**

19 First industrialist Alumni

1. Mr. I. P. Mathur, I batch, started his own factory M/s Marble Soap Works in 1925

2. Mr. R. M. Mathur, 1926 Batch, manufactured Hydrogen Peroxide first time in India

20 **First Building**

Initially the laboratories and lectures were held in the then Govt. Soda Factory (which was later converted into Forest View Hostel, after that into the office of the Assistant Engineer, Construction, then the Central Bank of India and presently some Residences near canteen).

With the completion of Luxmanbagh bungalows near Company bagh crossing, Nawabganj in 1922, the institute was housed in the following bungalows :-

Section	**Bungalow No.**
Applied Chemistry	1& 4
Oil Technology	3
Workshop with pilot plants	2

21 **First Hostel**

A bungalow of some Nawab near the Govt. Central Textile Institute, Souterganj was acquired and made the hostel. Later the bungalow no.4 in the Luxman bagh was the hostel.

22 **First Academic Standard**

The grading system was finalized during **1924-25** and was of very high standard as following:-

Grade	Range of Marks	Class of Diploma
+	75-100	
	75	I (between 75 and 100%)
-	70-74	
+	61-69	
	60	II (between 60 and 75%)
-	51-59	
+	41-50	
	40	III (between 40 and 60%)
-	0-39	

23 **Foundation stone of main building**

The foundation stone of the building was laid down on 25.11.1921 by the then Governor of U.P. Sir Spencer Harcourt Butler in the premises of the then c

24 **First Main Building**

North Wing(presently room no.1-166 to 171) of the building was completed in 1925 and only the lecture rooms were shifted from Luxman Bagh bungalows.

25 **First Development**

The **Leather Technology** course was added in the year 1922 with an intake of two students. **Sugar Technology** section was added in 1928. These courses were later abolished with the creation of separate institutions.

26 **First passed out batch**

In **1924,** six students who were admitted in the year 1921 under sl. no. 9. No class of diploma was awarded because the grading system was not finalized until 1925.

27 **In May 1925** (The II Batch of students which was admitted in 1922) as given below -

S.No.	Course		Name of Student	(%)	Class
1	Applied Chemical	1	Anant Narain Srivastava	58	II
	Research	2	Khem Raj Gupta	52	III
2	Oil Technology	1	Kailash Prasad Bhargava	62	II
		2	Hanuman Das Gupta	46	III
		3	Gopinath Mishra	43	III
		4	Balmukund Bhargava	43	Fail
3	Leather Technology	1	Trilokinath Gangwar	45	III
		2	Deo Datt Arora	54	II

Remarks In consideration of the fact that the percentage of marks required For I, II & III class diploma were not announced until 1924-25, A.N. Srivastava & D.D. Arora may be given II class diploma.

continued to page 3……..

Bal Mukund Bhargava has not put in the requisite attendance to obtain a diploma.

Place : Cawnpore Sd/- E.R. Watson

Dated : 13th May, 1925 Seal : Principal

TECHNOLOGICAL INSTITUTE,
U.P., Cawonpore

Note : The remarks clearly show the flexibility yet strictness in maintaining the academic standard.

28 **First Higher Diploma**

FHBTI (Fellowship of HBTI) in 1932 a three year higher research course. Admission to this course after AHBTI. I batch passed in 1935 : Sh. P.N. Mathur who did Dip Tech in 1932 onlyone student.

29 **First University Affiliation**

Agra University in 1958. Later

Kanpur University in 1967 on its inception.

30 **First Degree Courses**

The two diploma courses, AHBTI Chem. Engg. and AHBTI Oil Tech., were converted into degree courses in 1958 respectively as

1. B.Sc. (Chem. Engg) of four year duration post I.Sc

2. B.Sc. (Tech) Oil Technology of Two Year duration post B.Sc.

31 **First Master Degree courses**

Started from 1960

Post B.Sc. (Tech) : 1. M.Sc. (Tech) Oil Technology

2. M.Sc. (Tech) Paints & Varnishes

Post B.Sc.(Tech.) or M.Sc.: M.Sc. (Tech). Applied Microbiology

32 **First Workshop Building**

The present Workshop building was completed in 1957 and the Workshop with pilot plants were shifted from Luxmanbagh Bungalow No. 2

33 **First Industrial Plants**

With the completion of WS Building in 1957, the Industrial Oil Mill, Soap Factory & Paints & Varnish manufacturing machines were installed with full production of mustard oil, washing soaps & Paints & Varnishes. The products mustard oil, washing soaps, etc. were sold among HBTI employees at a nominal price. These industrial plants were later closed & partially demolished.

34 **First Chemical Engg. Pilot Plants**

The Chem. Engg. Pilot plants such as Distillation Units, Evaporators, etc., etc. were also installed first time in Northern India. It was a unique feature in this part of the country. These plants can still be seen in the present Workshop.

35 **First games & sports**

In 1932 when student strength was sufficient, teams in different games were formed and HBTI took part in Inter-College Tournaments of Kanpur

36 **First Alumni Association**

"Old Boys' Association" (O.B.A.).Even after separation of Sugar section as a separate Instt. in 1936, the OBA continued to work as a joint Assn. of the two Institutes.

37 **First Distinguished Politician addressed**

Pt. Jawahar Lal Nehru in 1942, during Non Cooperation Movement, addressed HBTI

38 **First Professional Association**

"Oil Technologists' Association of India" (OTA) was formed in 1944.

39 **First Girl Students**

Two admitted in 1966

1. Km. Pratibha Limaye in B.Sc.(Civil Engg.)

2. Km. Neela Patwardhan in B.Sc.(Chem. Engg.)

40 **First time courses in India**

B. Sc. (Chem.Tech.) Biochemical Engg. in 1964 and M. Sc. (Chem.Engg.) Practice in1965.

41 **First time courses in U.P.**

M. Sc. (Tech.) Applied Microbiology in 1956,

B.Sc.(Chem.Tech.) in Food Tech. and in Plastics Tech. in 1964

42 **First Faculty Club**

Formed in 1965

43 **First Teachers' Association**

Formed **First Teachers' Association**in 1970. Registered under Societies Act on 29.7.1970. Recognized by the B.O.G. in 1972.

44 **First student strike**

One day token strike during 1967-68

45 **First sine die closure**

For 15 days during 1969-70

46 **First Ragging**

No ragging in the beginning. Later, only verbal fun till about 1965

47 **First Dean of Students' Welfare**

Dr. D. P. Khandelwal, Prof. & Head, Physics Deptt. in 1972-73

48 **First Chairman C.S.A.**

Prof. A. C. Gupta, I/c Oil &.Paint Tech. Deptt.

49 **First Seminars in India held at HBTI**

1. Topic "Bio-Chemical Engg. Training & Research" during Jan. 25-28, 1967
2. Topic "Bio-Medical Engg." on Jan.14 & 15, 1968

50 **First Highly Distinguished Sportsmen**

1. Vijay Kumar Garg student of B. Sc. (Chem. Engg.) was Captain for Badminton of Agra University and represented Agra University in Inter –University Sports during 1964-65.
2. Umesh Kumr Misra, M. Sc. (Tech.) Applied Microbiology 1965 was Agra University Gymnastic Champion in1964-65 & again in 1965-66 who also won All India Inter University Gymnastic Championship in 1965-66.

51 **First Ph.D.(Tech.)**

Gyanendra Kumar Saxena, B. Sc. (Tech) Oil Tech.1959 & M. Sc. (Tech.) Oil Tech. 1960 was awarded Ph.D (Tech.) by Agra University in 1966

52 **First Convocation**

In 1962 (Second was held in 1966-67)

53 **First B.O.G. Chairman**

Smt. Sucheta Kriplani, Chief Minister, U.P. 1965

54 **First Father-Son students**

a. Krishna Gopal Tandon ,AHBTI General Research 1941 and Shailesh Tandon, B. Sc. (Tech.) Oil Tech. 1965,
b. Shyam Sunder Lal Garg, B.Sc.(Chem.Engg.) 1962 and Rajneesh Garg, B. Chem. Tech. Paint 1990,
c. Balbir Singh Taneja, B. Chem. Tech. Bio-chem.Engg. 1970 and Inderjeet Singh, B. Chem. Tech. Paint 1998

55 **First BrotherSister students**

N. Raju Iyer, B. Sc. Tech. Oil 1961 & M.Sc.Tech. Oil 1962,

Sister: N. Sharda, B.Sc. (Chem. Engg.) 1972

56 **First Three Family member students**

1. Kamala Kant Shukla, Dip. Tech. Oil Tech 1927, 2. His cousin, Adi Nath Misra, Dip. Tech. Sugar Tech.1933
3. His brother, Laxmi Kant Shukla, AHBTI Oil Tech. 1938

Note: Sri R. K. Misra, S/o Adi Nath Misra, , was Electrician in HBTI during 1965-95

57 **First largest Family member students**

Four members

1. Girish Chandra Srivastava, B. Sc. (Mech. Engg.)1970
2. Brother,DineshChandraSrivastava,B.Sc (Elect. Engg.) 1973
3. Nephew Arun Kumar, B.Sc. (Elect. Engg.) 1976
4. Youngest brother, Mukesh Chandra, B.Tech. Paint Tech, 1983 & M.Tech. Paint 1985 (Son-in-law of Dr. S. Chandra, the compiler)

58 **First student who became Union Minister**

K. D. Malviya, Oil Tech. Short Course 1930, Minister of Industries,U.P. and later became Petroleum Minister, Central Govt., New Delhi

59 **First students who became Director NSI**

1. S.N.Gundurao,AHBTI Sugar Tech. 1934 became Director, National Sugar Intt.(NSI), Kanpur during 1956-63 (while it was housed in HBTI)
2. Suresh Chandra Gupta, AHBTI Sugar Tech. 1935 became Director, National Sugar Intt.(NSI), Kanpur in 1971

60 **First student who became Director HBTI**

R. P. Singh, B.Tech. Oil 1975,M.Tech.1977 became Director, HBTI during 2004-07

61 **First Alumni in HBTI Faculty**

Om Prakash Gupta, Dip.Tech.Oil Tech.1926 became Head of Oil Section during 1947-61

62 **First student who became Registrar HBTI**

S. N. Kapoor, AHBTI General Research 1941was Registrar HBTI during 1964-69

63 **First student who was deputed to Common Wealth Secretariat**

Sushil Chandra Pandey, AHBTI Oil Tech. 1951, FHBTI 1959, was deputed to Common Wealth Secretariat in London, U.K. during Nineteen Seventees

64 **First largest batch of students**

78 students of B.Sc. (Chem. Engg.) passed out in 1970 (admitted in 1966, intake was 90)

65 **First smallest batches of students**

1. One student of Dip. Tech. Leather Tech., M. A. Abbasi, passed out in1926
2. One student of Dip. Tech. Sugar Tech., K. C. Joshi, passed out in 1929

66 **First student who joined Film line**

Satish Bahadur, AHBTI Oil Tech. 1947, was Professor in All India Film & Television Institute, Poona

67 **First student who became Member of Rajya Sabha**

Prem Manohar, Oil Short Course 1947, Prop. Solar Chemicals, Fazalganj, Kanpur

68 **First Family members in the same batch**

Mansa Ram Agarwal and his cousin Sewa Ram passed out AHBTI Oil Tech. in 1946

69 **First students who did two full time Diploma courses**

1. Shyam Lal Garg did AHBTI Sugar Tech. in 1938 and AHBTI Oil Tech. in 1940
2. Ganesh Chandra did AHBTI Gen. Res. in 1947 & AHBTI Chem. Engg. in 1957

70 **First student who did three full time courses**

Mohan Chandra Joshi did AHBTI Gen. Res. in 1953, AHBTI Chem. Engg. in 1957 and FHBTI in 1959

71 **First Swatantrta Sangram Senani**

Radhey Shyam of Amroha,Dist Moradabad did Short Course in Sugar Tech.1937. His sonin-law Bipin Gupta did B.Tech. Food Tech. in 1978

72 **First Highest dignity visited HBTI**

Dr. Gopal Swaroop Pathak, Vice-President,India, inaugurated the Golden Jubilee Function and delivered the Convocation address on January 23, 1973

73 **First Lady Faculty**

Miss Sanyukta Banerjee, Lecturer, Maths.Deptt.1966-68. Later married to Mr. R.K.Sharma,Lecturer, Mech. Engg.,HBTI and both left HBTI

74 **First student having longest name**

S. R. K. K. N. V. Rajabahadur, B. Tech. (Chem. Tech.) Paint Tech. 1978

75 **First Community HBTI interaction**

1. "OPEN HOUSE-HBTI" for Public during 1966-67.
2. "GET TO GETHER" with the principals and selected science students from the Kanpur colleges during 1967

76 **First student married to Hindi Film Actress**

Vijay C. Govil, B. Sc. (Chem.Engg.)1966 married to famous Hindi film actress and TV fame, Tabassum. His younger brother, Arun Govil, played the role of Ram in the Ramanand Sagar's famous TV serial Ramayan.

77 **HBTI captain of two games**

Sushil Chandra, B. Sc. Tech. 1963 & M. Sc. Tech. 1964, was Badminton captain during 1962-63 and Volleyball captain during 1963-64.

स्वच्छ भारत
स्वस्थ भारत

महा-अभियान के अन्तर्गत

ALUMNI ASSOCIATION, HBTI, KANPUR

&

HARCOURT BUTLER TECHNICAL UNIVERSITY, KANPUR

की अनूठी पहल

संस्थापक दिवस के उपलक्ष्य में

स्वच्छ एच.बी.टी.यू. स्वस्थ एच.बी.टी.यू. सप्ताह
नवम्बर 2017

- निदेशक मण्डल, प्रशासन, विभागाध्यक्षों एवं छात्रों के सहयोग से ALUMNI ASSOCIATION, HBTI, KANPUR द्वारा आयोजित सप्ताह में सभी विभागों के उद्यानों की वृहद सुरक्षा एवं संरक्षा जिससे संस्थान का वातावरण सुरम्य बनाने का कार्य किया गया।
- Corridors, Footpaths, Car Parking, Tennis Court, Roadside, Auditorium & Canteen के चारों तरफ तथा अविकसित सभी क्षेत्रों में उगे हुये जंगली घास-फूस की सफाई एवं उसका निस्तारण।
- रक्तदान- राजकीय चिकित्सालय, कानपुर के सहयोग से।
- रक्तदान सर्वश्रेष्ठ दान है जिससे मरीज/घायल के प्राणों की रक्षा होती है। आवश्यकता पड़ने पर स्वैच्छिक रक्तदान हेतु छात्रों तथा HBTU परिवार का संकल्प अभियान।
- संकरा आई हॉस्पिटल कानपुर के सहयोग से सभी संकाय सदस्यों एवं कर्मचारियों के नेत्रों का सम्पूर्ण परीक्षण।
- न्यू लीलावती हॉस्पिटल तथा बृज मेडिकल सेण्टर, कानपुर के सहयोग से सामान्य स्वास्थ्य परीक्षण।
- समग्र HBTU परिवार के Telephone No. and e-mail एकत्रित कर उन्हें एक लघु निर्देशिका के रूप में मुद्रित करवाना, जिससे हम आपस में और अच्छी तरह से संगठित रहकर अपने नैतिक एवं सामाजिक उत्तरदायित्व पूर्ण कर सकें। HBTU में छात्र क्रियाकलाप परिषद के माध्यम से नये कार्यक्रम संचालित करने हेतु व्यापक विचार-विनिमय।

Alumni Association : Room No. 1-161, HBTI, Kanpur Ph.: 0512-2532571, 9336270570, 9026726010

Srajan Park

1995 batch's thank you to HBTU

Harcoutian alumni always have a sense of gratitude towards their alma mater. It is a place which brought disparate identities together, polished them into a fine jewel and developed fine professionals out of them. We also made friends and memories for a lifetime.

For the silver jubilee reunion, the 1995 batch was exploring ways to give back to the alma mater and stay connected. Our gang leader Shalabh Garg came up with the idea of a park. This is very relevant when we are all exploring sustainability and green initiatives.

Srajan Park was set up in the memory of Sharda Mishra, Jayanta Barua Naresh Shukla, our batchmates, who left for their heavenly abode.

The entire batch, which was extremely excited about the idea, contributed whole heartedly towards the initiative by opening their wallet and showing their support.

The work was impossible without Atul Aggarwal and Manish Sharma who made countless trips to the park and provided their input into the development of the park.

The park was not possible without the support of Mr. Vivek Mishra, an alum who facilitated the park. The concept was visualized and planned. It had been an extra curricular trait possessed by him which was capitalised and the task was taken up.

We owe our thanks to Prof. Manoj Shukla, Registrar who helped with the approval process and the entire HBTU Administra- tion who allowed an alumni driven initiative.


11-22-20 17:42


11-22-20 17:44


11-22-20 17:43

We owe our gratitude to all of them. The excitement about the park can be assessed from the opening ceremony where the entire batch participated in planting the tree saplings. Several distinguished alumni from other batches including Balram Upadhyay also participated in the event. No event in HBTU is complete without the tea from Ramu who also blessed the occasion and rekindled old memories. Srajan park has provided a green footprint in the West Campus. It allowed the 1995 batch to reconnect for a common cause. Finally it is a model for other batches to follow i.e. identify bite-sized ideas which can be implemented to leave a footprint for common good. We encourage other batches to beat the 1995 batch in this game.

Deepak Pant - HBTI 1995 batch

Sushil Kumar Meena
2009 Civil Engineering
HBTU Kanpur

Taruna Vidhay
2009 Computer Science & Engg.
HBTU Kanpur

NIRBHED FOUNDATION

Excellence in Coomendable Extra Mural Service

(Equality for All)

Nirbhed foundation is an all India jurisdiction non-government organization registered under societies Act- 1860. As self explanatory, it means without discrimination- "***Equality for All***". Nirbhed Foundation was established in 2015, is a team of young professionals (mostly government Officers) .

Team Nirbhed is working rigorously in providing basic necessities of life like Education, Clothing, Nutritional Food, Medical Facilities by organizing health camps, Skill Development, Health and Hygiene, running Environmental Protection drives and various other awareness projects to underprivileged people/children residing in slums/rural parts of India.

We believe in nurturing mediocrity and raising it to a level where our students become street smart and are able to gather resources for themselves, thus, becoming an asset for the country.

Our Projects have been designed after understanding their Lives, schedule, needs and basic requirements of their lives: Our work can broadly be classified in following four :

- Project Nirmaan
- Project Utsah
- Project Sankalp
- Project Samman

Our Work Till Now:

1. **Under Project Nirmaan:** An initiative for Overall Development of children:
   - Education-Food & Nutrition-Health & Medical Facilities-Extracurricular Activities-Moral Values.
   - School like environment & quality learning process

   Reached 10 States-
   - Providing **regular education to more than 3700 children**.
   - More than **2000 meals are being served twice a day on daily bases** to children and their families in slums/ villages in U.P and Bihar.
   - **On Door Medical Assistance & Health Awareness (In association with Indian Medical Association, India**)- Regular medical check-ups, immediate and free of cost medical assistance medication provided to thousands of children and their families that includes infants and mothers as well. Till now or-ganised more than 300 medical camps. 100+ Severe Medical cases handeled.

   - More than 250 Children's

COVID-19 PANDEMIC RELIEF WORK:

- Distributed more than **110 lakh meals** since March 2020 (cooked and raw food) uptill now.
- Regular cooked food is been provided in slums in evening to 800 kids & their families as classes are stopped but they need to be fed.

- Juices, masks, soaps, sanitizers, hand gloves are also being distributed.
- We also took care of the medical requirements of the people. Oxygen cylinders and medicines were provided to more than 100 people who were infected.
- Till now, more than 2000 sanitizers and 8000+ masks are distributed by our organization
- During Lockdown, with our initiative "MAI BHI HU SHIKSHAK" we provided employment to our elder children from slums who were teaching 250 younger children at their home (slums & villages) which helped children losing touch from studies and generating income as salary and helping their family
- We also provided direct monetary support to 38 needy families by directly transferring money (Rs.1000 to Rs.3000) in their accounts/buying rail tickets/bus tickets/ cash support to migrants and daily wagers.
- 10 elder students were enrolled in private school in the year 2019 and overall study related expenses (fees/stationary/ books/uniform etc) were paid by Nirbhed Foundation.

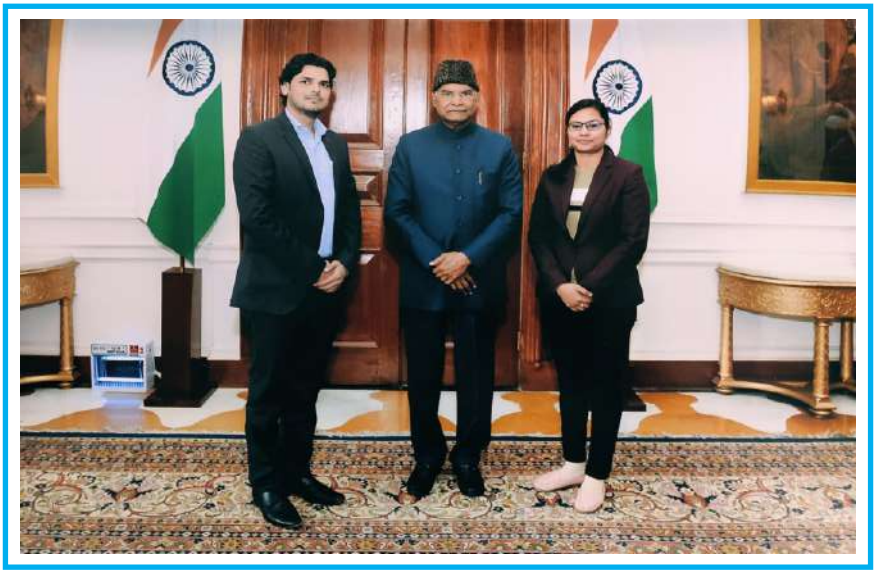
- Uniform(T-shirts/ Pants/Sweaters) have been distributed to 1000 kids twice a

year along with other necessary items such as school bags, water bottles and tiffin box.

- All the stationary material are being provided by Nirbhed Foundation along with books and copies etc.

AWARDS & RECOGNIZATION:

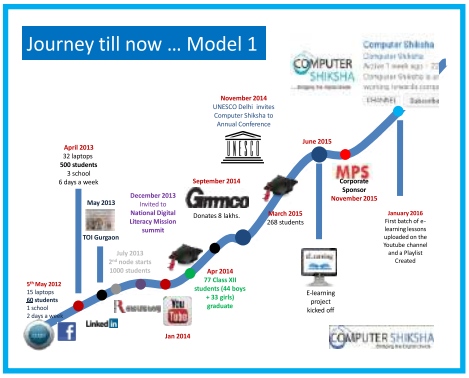
- ***Rashtrapati Bhawan - A moment of Honour (2018-2020)-*** *In 2018, Founders have been called by President Secretariat to discuss and appreciate the work done by Nirbhed Foundation in contribution toward society without taking any monetary support in the form of CSR/Grant from any organization. President and Secretariat liked our work and we got invited from Rashtrapati Bhawan in Jan 2020. Honorable President of India-Shri Ram Nath Kovind met us , appreciated our work and motivated to keep doing. We find ourself fortunate to get appreciated by the president of India.*

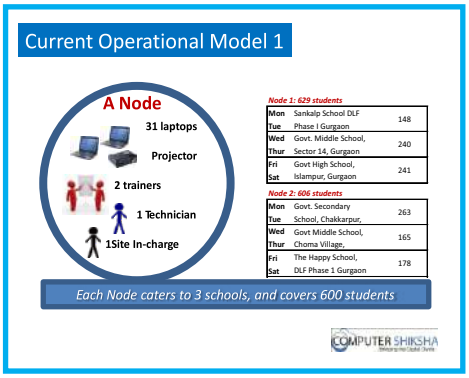


COMPUTER SHIKSHA
....Bridging the Digital Divide

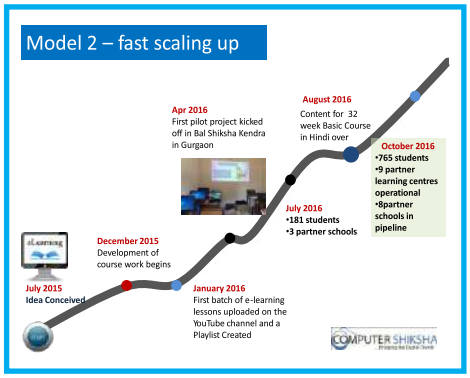

Swapnalekha

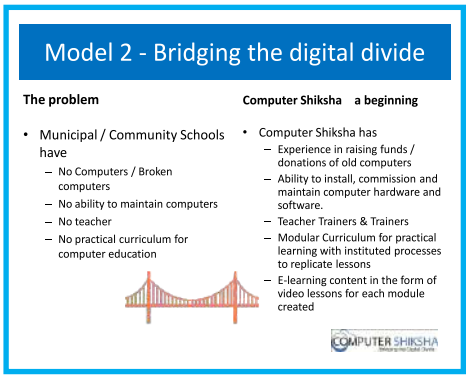
Swapnalekha is an electrical engineer from the 1993 batch. While she was in college she was involved with NSS in a very meaningful manner and also won the titles of 'Karmasheel' and 'Karmath' while in college. It is therefore no surprise that she started a social enterprise. After having had a successful corporate career and signing out of a corporate career as Head (Human Resources) of SAS India she started computer Shiksha along with Dr Rakesh, Ex. Chief Executive Officer of DCM Technologies to bridge what they call is the digital divide. Computer Shiksha has taken on itself the responsibility to enable underserved communities especially children with the knowledge of computers to improve the quality of their own lives. What started as a modest effort of educating 60 children with 15 laptops has now grown into a massive footprint across the country and has also gone to inspire similar stories in other parts of the world too.

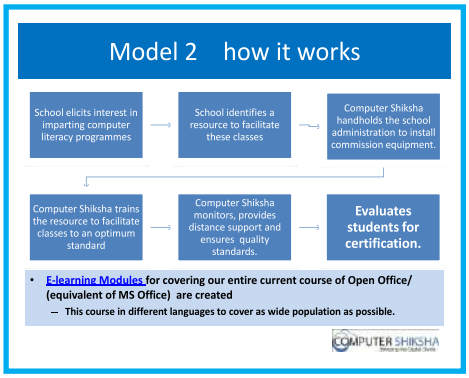




capability or the where withal to provide computer literacy programmes. The organi-zation has produced an entire Computer Lite-racy pro-gramme in the form of Self Learning videos in seven languages . Now Computer Shiksha enables schools with a computer lab built from donated end of life com-puters of corporates and then trains one resource from the School to use the content to deliver classes. The entire IT infrastructure is owned and maintained by Computer Shiksha. Com-puter Shiksha ensures that the quality of the in-struction at the school is as per expected standards The entire certification process of students is also managed by computer Shiksha.







Today more than 1,10,000 students all over the country in more than 550 schools across 16 states in the country are undergo-ing computer literacy programs under the aegis of Computer Shiksha.

The organisation has also been recognised and awarded at various fora for contribution and impact in the underserved co-mmunities.

In the year 2019 the Ministry of Cultural affairs identi-fied 200 NGOs across the country who have had a meaningful impact on the last last person in the society (Antyoday) and com-puter Shiksha was one of them.

A book was re-leased with details of 200 NGOs by the vice president of India and computer Shiksha has found the name in there

It was also the only NGO from India who were invited at the CSR social innovation summit in Los Angeles in the year 2019.

Computer Shiksha has also proven that 'Vasudhaiva Kutumbakam'. The entire computer Shiksha model has been utilised in Ghana to implement computer literacy program. Currently hundreds of children in Ghana are benefitting from a model created by computer Shiksha in learning how to use computers to better their lives.

The Three Harcourtians transforming the dynamics of Indian SMEs

A leading internet entrepreneur, angel investor and an evangelist for SME issues, Dinesh Agarwal has sealed a reputation for himself as a resilient and dynamic strategist who has constantly evolved with the times. From the very beginning, Dinesh wanted to create a long-lasting legacy, 'a forever company' in which he stupendously succeeded by introducing his brain child 'IndiaMART', India's first ever online B2B marketplace and became an example to follow for all Harcourtians.

Dinesh, after graduating from HBTI, joined IT industry and also worked with a firm in the US. He, being a true patriot, while working there, was constantly looking for reasons to come back to India and contribute to his nation. He found this opportunity in 1995 when internet was launched in India. Around that time the demand for Indian Products across the globe was

Mr. Dinesh Agarwal Mr. Dinesh Gulati Mr. Madhup Agarwal

increasing, however, Indian SME did not have the resources to access the global markets. This gave birth to the unique idea of a search-enabled online business for Indian SMEs and thus IndiaMART was born in April 1996. What followed later is history. We have all witnessed how IndiaMART went on to become the most loved B2B marketing platform in India. Even during the tough times like DotCom Burst, 9/11 Terror Attacks, subprime crisis, demonitization or the recent pandemic, due to his conviction and strong leadership, Dinesh led IndiaMART successfully navigated these challenges and emerged as a much stronger platform after each crisis.

His active association with his alma mater goes much before HBTI became HBTU. Even today, Dinesh Agarwal is a serving member of the Executive Council of HBTU and provides valuable industry perspectives that help the council to make informed decisions.

Dinesh has played a crucial role in transforming the business ecosystem in India over the last two decades by helping millions of micro and small enterprises come online. 'IndiaMART', with the aim of bringing in 'ease of doing business' in the country, has constantly delivered substantial innovation and digital transformation for the enterprises. Today 'IndiaMART' is a flourishing business that serves more than 138 million registered users and 6.7 million sellers across the country. In June 2019, IndiaMART was also successfully listed on the BSE and NSE with its Initial Public Offer (IPO) which was very well received by the market.

Dinesh has also been recognized by various media houses and industry associations as a vocal champion rooting for the cause of Indian SMEs. He also represented the success story of India and its e-commerce on Trade and Development of eCommerce week at the United Nations Conference of 2018 in Geneva.

The legacy was joined by “a batchmate, a friend, a philosopher, and a sounding board” another Harcourtian, Madhup Agarwal who officially joined IndiaMART in 2004 while being unofficially an integral part of the organization since its inception. He is a tech junkie, loves to face challenges head-on and believes in automation. He had implemented technology in education, logistics and insurance much before people even thought that this was possible. At IndiaMART, he has been a torch bearer for a host of technology lead innovations. Currently, as Head, Business Excellence, at IndiaMART, he is leading several processes and automation initiatives to improve overall customer experience and quality of servicing by reducing the complexity of processes and automation. Madhup has also been constantly in touch with HBTU as a serving member of the Board of Studies of the Department of Computer Sciences.

The third Harcourtian, Dinesh Gulati (COO), joined the company in 2012. DG, as he is popularly known, is the mastermind behind all the innovative business practices at IndiaMART. He has been responsible for improving the overall customer delight, people efficiency and setting the platform for long-term profitability of the organization and making it easy for its customers to transform their businesses digitally. He brought to table his vast experience from telecom and media industry and his keen interest in technology based solutions has helped in taking IndiaMART to new heights.

The association of these three, goes beyond their professional relationship. Their friendship goes way back to their hostel days of engineering at HBTI. *"With DA it was a different kind of a bond. He was extremely intelligent. He would read once and top the examination with huge margins. The guy on the second rank could not even think of competing with him. But, he was never a morning person. When we were in our Fourth year, despite being the topper he didn't get the hostel meant for the final year students because when the rooms were getting allotted he was sleeping. Consequently, he had to stay in another hostel but every day he would come to our mess, have his breakfast and bill it in my name"*, Madhup laughed while reminiscing about their HBTI days.

All three Harcourtians met and grew together at HBTU, Dinesh Agarwal started with his dream 'IndiaMART', and then they again met each other at different timelines to pool their collective experiences together and help Indian SMEs to reach new highs in both domestic and international markets. They remained true to their Harcourtians' values & applied their learnings from college days to create this lifelong legacy that future generations will always look up to.

मैं एच.बी.टी.यू. बोल रहा हूँ।

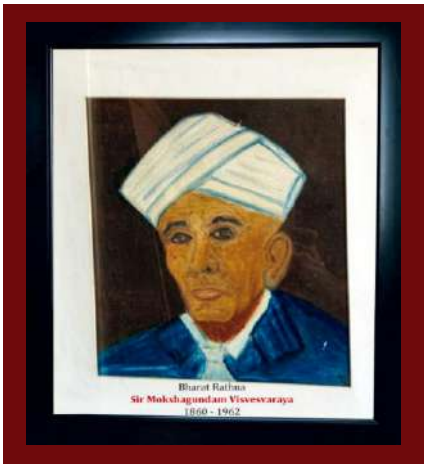
Prof. (Dr.) Neeta Awasthy

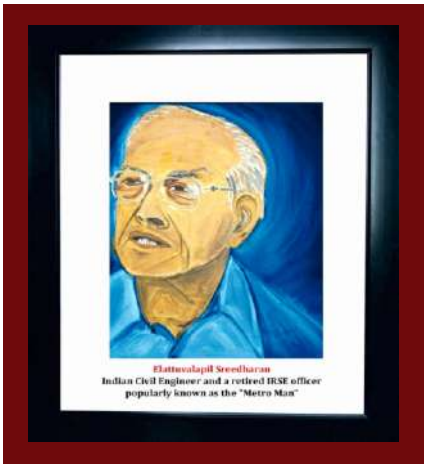
An alumnus of HBTI, Kanpur, Prof. (Dr.) Neeta Awasthy completed her masters from A.K.T.U. and doctorate from Uttarakhand Technical University. She had her first job in NTPC. Thereafter, she did software consulting for 14 years and then academics for the last 20 years. Presently, she is working as Director, GL BAJAJ Group of Institutions, Mathura, she is an amalgamation of Electronics Engineering and Computer Science, she is the best fit for problems that are multi-disciplinary, resource extensive, and data extensive.

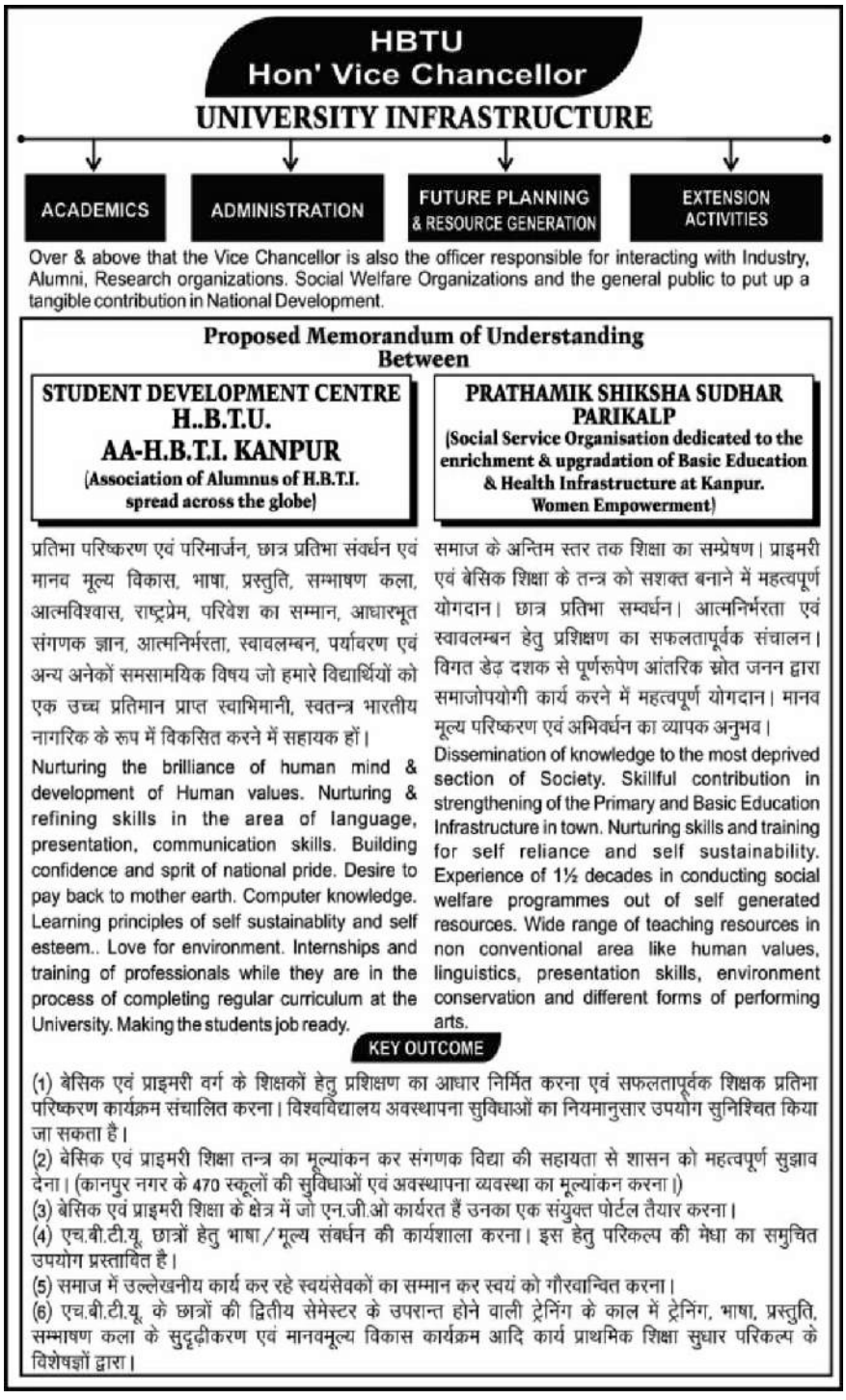
She has guided more than a dozen scholars during their M.Tech. and Ph.D. She is a regular speaker at conferences in India and abroad. Her

works are being regularly published in acclaimed journals. She has published three books. She is a consultant in the field of Quality improvement of technical education, energy, innovations & Entrepreneurship, placements, apart from Artificial Intelligence.

Neeta is a self motivated and self learnt artist. She has been painting for the last forty years and has contributed in few camps and has had contribution in art exhibitions also. She learnt this art out of the classroom and painting is now a subject close to her heart. Colour art and painting is the way of her meditation. She is now close to nature and has developed this extra mural capability. Neeta's passion for Art and Culture is amalgamation of Science and Art personified.


Bharat Ratna
Sir Mokshagundam Visvesvaraya
1860 - 1962


Elattuvalapil Sreedharan
Indian Civil Engineer and a retired IRSE officer
popularly known as the "Metro Man"



Over & above that the Vice Chancellor is also the officer responsible for interacting with Industry, Alumni, Research organizations. Social Welfare Organizations and the general public to put up a tangible contribution in National Development.

Proposed Memorandum of Understanding Between

STUDENT DEVELOPMENT CENTRE
H..B.T.U.
AA-H.B.T.I. KANPUR
(Association of Alumnus of H.B.T.I. spread across the globe)

प्रतिभा परिष्करण एवं परिमार्जन, छात्र प्रतिभा संवर्धन एवं मानव मूल्य विकास, भाषा, प्रस्तुति, सम्भाषण कला, आत्मविश्वास, राष्ट्रप्रेम, परिवेश का सम्मान, आधारभूत संगणक ज्ञान, आत्मनिर्भरता, स्वावलम्बन, पर्यावरण एवं अन्य अनेकों समसामयिक विषय जो हमारे विद्यार्थियों को एक उच्च प्रतिमान प्राप्त स्वाभिमानी, स्वतन्त्र भारतीय नागरिक के रूप में विकसित करने में सहायक हों।

Nurturing the brilliance of human mind & development of Human values. Nurturing & refining skills in the area of language, presentation, communication skills. Building confidence and sprit of national pride. Desire to pay back to mother earth. Computer knowledge. Learning principles of self sustainablity and self esteem.. Love for environment. Internships and training of professionals while they are in the process of completing regular curriculum at the University. Making the students job ready.

PRATHAMIK SHIKSHA SUDHAR PARIKALP
(Social Service Organisation dedicated to the enrichment & upgradation of Basic Education & Health Infrastructure at Kanpur. Women Empowerment)

समाज के अन्तिम स्तर तक शिक्षा का सम्प्रेषण। प्राइमरी एवं बेसिक शिक्षा के तन्त्र को सशक्त बनाने में महत्वपूर्ण योगदान। छात्र प्रतिभा सम्वर्धन। आत्मनिर्भरता एवं स्वावलम्बन हेतु प्रशिक्षण का सफलतापूर्वक संचालन। विगत डेढ़ दशक से पूर्णरूपेण आंतरिक स्रोत जनन द्वारा समाजोपयोगी कार्य करने में महत्वपूर्ण योगदान। मानव मूल्य परिष्करण एवं अभिवर्धन का व्यापक अनुभव।

Dissemination of knowledge to the most deprived section of Society. Skillful contribution in strengthening of the Primary and Basic Education Infrastructure in town. Nurturing skills and training for self reliance and self sustainability. Experience of 1½ decades in conducting social welfare programmes out of self generated resources. Wide range of teaching resources in non conventional area like human values, linguistics, presentation skills, environment conservation and different forms of performing arts.

KEY OUTCOME

(1) बेसिक एवं प्राइमरी वर्ग के शिक्षकों हेतु प्रशिक्षण का आधार निर्मित करना एवं सफलतापूर्वक शिक्षक प्रतिभा परिष्करण कार्यक्रम संचालित करना। विश्वविद्यालय अवस्थापना सुविधाओं का नियमानुसार उपयोग सुनिश्चित किया जा सकता है।

(2) बेसिक एवं प्राइमरी शिक्षा तन्त्र का मूल्यांकन कर संगणक विद्या की सहायता से शासन को महत्वपूर्ण सुझाव देना। (कानपुर नगर के 470 स्कूलों की सुविधाओं एवं अवस्थापना व्यवस्था का मूल्यांकन करना।)

(3) बेसिक एवं प्राइमरी शिक्षा के क्षेत्र में जो एन.जी.ओ कार्यरत हैं उनका एक संयुक्त पोर्टल तैयार करना।

(4) एच.बी.टी.यू. छात्रों हेतु भाषा/मूल्य संवर्धन की कार्यशाला करना। इस हेतु परिकल्प की मेधा का समुचित उपयोग प्रस्तावित है।

(5) समाज में उल्लेखनीय कार्य कर रहे स्वयंसेवकों का सम्मान कर स्वयं को गौरवान्वित करना।

(6) एच.बी.टी.यू. के छात्रों की द्वितीय सेमेस्टर के उपरान्त होने वाली ट्रेनिंग के काल में ट्रेनिंग, भाषा, प्रस्तुति, सम्भाषण कला के सुदृढ़ीकरण एवं मानवमूल्य विकास कार्यक्रम आदि कार्य प्राथमिक शिक्षा सुधार परिकल्प के विशेषज्ञों द्वारा।

हरकोर्ट बटलर प्राविधिक विश्वविद्यालय

के

छात्र कल्याण विभाग एवम् अन्तर्राष्ट्रीय पूर्व छात्र संघ

तथा

प्राथमिक शिक्षा सुधार परिकल्प, कानपुर

के संयुक्त तत्त्वावधान में आयोजित संगोष्ठी-''प्रौद्योगिकी एवं मानविकी का समन्वय''

एवं ''हिन्दी व्याकरण संदर्शिका'' पुस्तक का विमोचन

स्थान: राधाकृष्णन् सभागार, दिनांक 12 सितम्बर 2021

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प्रा.शि.सु.प.

सभाध्यक्ष
प्रो० समशेर
कुलपति
एच.बी.टी.यू., कानपुर

आयोजक मण्डल

डा० विजय लक्ष्मी त्रिवेदी
अध्यक्ष
प्राथमिक शिक्षा सुधार परिकल्प, कानपुर

अतिविशिष्ट अतिथि
मा० अरुण पाठक
सदस्य, उ0प्र0 विधान परिषद
संरक्षक: प्रा0शि0सुधार परिकल्प

प्रो० राम नरेश त्रिपाठी
अधिष्ठाता छात्र कल्याण
एच.बी.टी.यू., कानपुर

श्री बलराम उपाध्याय (आई.पी.एस.)
अध्यक्ष, एल्यूमिनी एसोशियेशन
एच.बी.टी.आई., कानपुर

ALUMNI ASSOCIATION

Harcourt Butler Technological Institute, Kanpur

(Registered under Societies Registration Act 1880, Reg No. 220/2007-08 Dated 31/05/2007. GSTIN 09AADTA3677N1Z6)

छात्र प्रतिभा परिष्करण केन्द्र HBTU, पूर्व छात्र संघ एवं प्राथमिक शिक्षा सुधार परिकल्प द्वारा 12/09/2021 को आयोजित कार्यशाला की प्रगति आख्या

एच.बी.टी.यू. एवं प्राथमिक शिक्षा सुधार परिकल्प के संयुक्त तत्वाधान में राधाकृष्णन सभागार में नई शिक्षा नीति के अनुरूप उच्च शिक्षा संस्थानों द्वारा प्राथमिक शिक्षा का संवर्धन करने के उपक्रम में एच.बी.टी.यू. एवं प्राथमिक शिक्षा सुधार परिकल्प के मध्य परस्पर सहयोग पत्र पर हस्ताक्षर किया गया। इसका उद्देश्य बेसिक शिक्षा के तंत्र को सशक्त बनाने में तकनीक का महत्वपूर्ण योगदान देना तथा बेसिक एवं उच्च प्राथमिक वर्ग के शिक्षकों हेतु प्रशिक्षण प्रदान करना है।

इस अवसर पर परिकल्प की प्रकाशन माला के प्रथम पुष्प हिन्दी व्याकरण संदर्शिका का लोकार्पण किया गया। पुस्तक के लेखक संदीप उत्तम ने बताया कि ये संदर्शिका छात्रों के भाषा स्तर को बोलने, लिखने व पढ़ने में उपयोगी सिद्ध होगी। कार्यक्रम का शुभारम्भ दीप प्रज्जवलन द्वारा किया गया, डॉ. सुनीला मिश्रा एवं डॉ. सुषमा द्वारा प्रस्तुत सरस्वती वंदना प्रस्तुत की गयी।

इस अवसर पर एच.बी.टी.यू. कुलपति प्रोफेसर समशेर जी ने कहा कि तकनीक द्वारा प्राथमिक शिक्षा में क्रांतिकारी बदलाव लाया जा सकता है। एच.बी.टी.यू. पुरातन छात्र सचिव विवेक मिश्र जी ने कहा कि पुरातन छात्र परिषद् दोनों संस्थाओं के बीच सेतु का कार्य करेगी। अतिविशिष्ट अतिथि माननीय विधायक अरुण पाठक जी ने कहा कि प्राथमिक शिक्षा के क्षेत्र में नई शिक्षा नीति के अनुरूप ये कार्य बहुत बड़ा बदलाव लाएगा तथा उन्होंने हिन्दी भाषा के बोलने पढ़ने और लिखने के लिए भाषा संदर्शिका के उपयोग पर प्रकाश डाला।

जिला बेसिक शिक्षा अधिकारी डॉ. पवन कुमार तिवारी ने सभी से आह्वान किया कि वे अपने विद्यालय को गोद लेकर समाज में बदलाव के वाहक बनें।

कलाम लैब्स के स्टार्टअप द्वारा वर्ल्ड इनोवेशन अवार्ड विजेता हर्षित अवस्थी ने अपने प्रोजेक्ट द्वारा सभी को स्वयं आत्मनिर्भर बनने की आवश्यकता पर जोर दिया।

धन्यवाद ज्ञापन करते हुये प्राथमिक शिक्षा सुधार परिकल्प की अध्यक्ष डॉ. विजय लक्ष्मी त्रिवेदी ने कानपुर के प्रबुद्ध सहृदय सहयोगी समाज भारत विकास परिषद् रोटरी पारस मैत्रेय संगठना, प्रसिद्ध रंगकमी राधेश्याम दीक्षित, महेश दुबे, डॉ. नीरजा अग्निहोत्री तथा बड़ी संख्या में उपस्थित शिक्षकों, परिकल्प सदस्यों तथा युवा छात्र शक्ति को इसी प्रकार सहयोग का आह्वान किया। आयोजन के सफलतापूर्वक सम्पन्न होने के लिए प्राविधिक विश्वविद्यालय के कुलपति प्रोफेसर समशेर अतिविशिष्ट अतिथि श्री अरुण पाठक, प्रोफेसर राम नरेश त्रिपाठी, विशिष्ट अतिथि बी.एस.ए. डॉ. पवन कुमार तिवारी, विशिष्ट अतिथि सरदार जगमोहन सिंह सलूजा के अति महत्वपूर्ण वक्तव्यों एवं सर्वविध सहयोग के लिये हार्दिक आभार व्यक्त किया।

परिकल्प की प्राणशक्ति सचिव मंजू मिश्रा, विजया मिश्रा, उपाध्यक्ष शान्ता मुखर्जी, वैद्य विमल प्रकाश त्रिवेदी, उपाध्यक्ष आर. के. दीक्षित, कोषाध्यक्ष मृदुला चतुर्वेदी, संयुक्त सचिव राजीव अग्रवाल, कार्यकारिणी सदस्य नीलम कपूर, मंजू लता दीक्षित, डॉ. राज किशोरी सिंह, नीरा नागरथ, डॉ. शोभा मिश्रा, डॉ. नीलम त्रिवेदी तथा सेवाभावी सभी सदस्यों को धन्यवाद दिया।

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हमारे पूर्व छात्र श्री अरुण कुमार सिंह की धर्म पत्नी श्रीमती प्रतिमा सिंह हमारे समग्र एच.बी.टी.यू. परिवार की सांस्कृतिक धरोहर को समृद्ध करने में एक अप्रतिम कड़ी हैं।

इन्होंने विज्ञान में परास्नातक स्तर तक शिक्षा प्राप्त करी किन्तु इनका कला के प्रति स्वाभाविक रूझान रहा और विगत 30 वर्षों से अनवरत कला प्रेम की यह वृत्ति प्रबल से प्रबलतम होती जा रही है। आपने राष्ट्रीय एवं अन्तर्राष्ट्रीय स्तर की लगभग 50 से ऊपर प्रदर्शनियों में सफलता पूर्वक प्रतिभाग किया और अनेकों पुरस्कार प्राप्त की है। इस वर्ष संस्कृति मंत्रालय भारत सरकार से सीनियर फेलोशिप हेतु इन्हें चयनित किया गया है।



प्रतिमा के बनाये हुए चित्रों में भाव, कल्पना, चेतना, एक सोच एवं उड़ान हैं। उनमें रंग, रंग-कथा कहानियाँ हैं। लोकोक्तियों का चित्रण किया जाता है जिसमें कलाकार की आस्था प्रतिबिम्बित होती है। इनके चित्रों में मटमैले रंगों, रेखाओं की मधुरता एवं भारतीय सांस्कृतिक विरासत की झलक प्राप्त होती है। चित्रों के मूल विषय में हमारी प्राचीन संस्कृति, परम्परा, धरोहर, सभ्यता आदि दिखाई देते हैं।

आपके चित्रों में मौलिकता है, सृजन में प्रौढ़ता है जिससे संवेदना के भाव परिलक्षित होते हैं।