

BSDU NEWSLETTER

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Jan – June 2019



School of General Education



Bhartiya Skill Development University Jaipur

Editor's Desk

Welcome to the third edition of the Newsletter! We are honoured to be a part of this young University seeing it go from strength to strength. All the Schools have contributed wholeheartedly in seeing that BSDU attains world class standards in imparting skills and knowledge to the students. Several new faculty and non-teaching staff have joined the BSDU family and we extend a warm and hearty welcome to them. It has been our endeavour to cover the maximum number of events occurring at our University. In this Newsletter we have introduced a Scholars' Corner where we have write-ups by the first batch of research scholars. We are able to bring out this issue of the Newsletter well within the stipulated date, thanks to the timely submissions of articles and news updates. We look forward to your continued support in presenting you with the future editions of your Newsletter.

Dr. Surat Singh
Principal,
School of General Education



BSDU Updates

Prof. Achintya Choudhury,
Registrar, BSDU

Reporting the activities of the University from the Registrar's desk and restricting it to a limited space is not an easy task. I was therefore resisting the request for a report from the Editorial team members of this Newsletter with the pretention of a pseudo-busy behaviour. Ultimately, their perseverance won and I am here with my piece on different activities of BSDU for the period of Jan – Jun 2019.



**Dr. Joshi receiving PRAVASI BHARATIYA SAMMAN
from Hon'ble President of India**



**Brig. Pabla receiving an award
for Excellence in Academics and
Administrations**

BSDU is a happening University. In its life span of a little over two years, the University has never hesitated to take up challenges. In fact, its journey started with the unconventional path of imparting skill education. This six- month journey was also not different.



Members of BSDU family have continued traversing on this unknown terrain with confidence and conviction to ultimately reach the goal of skilling the youth and providing skilled manpower for this country.

During this journey of six months, some more members have joined the family. Though the number of students admitted during the semester was rather low, it was not unexpected considering the fact that admission to UG courses normally take place during July-August. 20 new staff members joined the fraternity during this period.

All the examinations were conducted on time and all 258 students of II and IV Semester B.Voc programmes were placed for Industrial Internship with stipends varying from ₹ 5000 – 12,000. Mr. Vikas Kumar Naga, a student from the School of Carpenter Skills participated in Global Skill Challenge Competition in Melbourne, Australia.

The 4th meeting of the Board of Management was held on April 5, 2019. While reviewing the progress of the University, the Board also took some important decisions in respect of fee structures, travel and leave policies, restructuring of Board of Studies etc. Two meetings of the Board of Studies (13th meeting on January 5, 2019 and 14th meeting on April 6, 2019) were also held during this period. B.Voc Curricula for VLSI Design Skills, Hospitality & Tourism Skills, Metal Construction Skills and Building Maintenance Skills were approved in these meetings. A booklet elaborating the journey of the BOS along with brief profiles of its members, was also released.

In order to expand the horizon of collaboration, six new Memoranda of Understanding were signed during this period with organizations dealing with skill education as well as some Industries. With these, the total number of MoU's signed by the University has gone up to 56.



BSDU has hosted quite a few events during this period. Some of the important events were 'Training the Trainers' program for 370 vocational trainers from Govt. Schools

(Jan 28 – Feb 1, 2019), 'School Principals' Summit' (Feb 22 and 23, 2019), Training of Trainers of HVAC&R Skill by Electronic Sector Skill Council of India (ESSCI) (Mar 28 – 31, 2019), Training of Industry personnel from Daikin Air-conditioning India Pvt. Ltd. and Ceratizit, visit by a delegation of educationists led by CEO, Jharkhand Skill Development Mission Society (Mar 13, 2019), launching of Industry Innovation Cell (Feb 1, 2019) etc.

Pioneering efforts of BSDU and its leaders in imparting Skill education was recognised at different forums. BSDU was included in the Top 10 Private Universities of the country by latest edition of the 'Digital Learning' magazine which was launched during the Higher Education & Human Resource Conclave held at Chandigarh on March 15, 2019. Brig. (Dr.) S S Pabla, Vice Chancellor was also honoured for Excellence in Academics and Administration in the same function. BSDU was adjudged the 'Best Skill University in India' and Dr. R K Joshi was honoured with 'Global Inspirational Icon in Skill Education' award at a function organized by Dialogue India at a function organized in Dubai on May 2, 2019.

During this period, a large number of dignitaries visited the University. Some of them were Mr. Ashok Chandna, MOS, Skill, Employment & Entrepreneurship, Govt. of Rajasthan on Feb 1, 2019, Prof. M P Poonia, Vice Chairman, AICTE on Jan 11, 2019. Mr. K L Jain, Hony. Secretary General, Rajasthan Chamber of Commerce & Industries visited on Jan 17, 2019, followed by a team of senior educationists led by CEO, Jharkhand

Skill Development Mission on March 13, 2019. Mrs. Ursula Joshi, our Mentor also made a personal visit to the campus and inspired all members of BSDU family through personal interaction.

Examination and Evaluation System at BSDU



Prof. Charanjeet Kaur Pabla,
COE, BSDU

BSDU is committed to developing an efficient and flexible continuous evaluation system with emphasis on high-quality skill learning. The University follows a credit based semester system and a *Cumulative Grade Point Average (CGPA)* system of evaluation for all the programmes.



The *Bachelor of Vocation* (B. Voc) and the *Master of Vocation* (M. Voc) programmes comprises six and four semesters respectively. There is a provision for multiple entry and exit for students in the B.Voc programme in compliance with the UGC guidelines and NSQF (National Skills Qualifications Framework).

All the programmes of the University comprise two main components namely – Skill Component (60% of the content) and General Education Component (40% of the content). The students are assessed on the above mentioned components by conducting examinations to test the *Skill component* and the subjects included in *General Education*. The students receive skill training in the University in the I, III, and IV semesters and undergo internship in industries during the II, IV, VI semesters.

General Education Component

The University conducts two In-semester examinations for formative assessment and end-semester examination for summative assessment. 50% weightage is assigned to formative assessment and 50% to summative assessment while calculating the grades and CGPA.

Skill Component

The Skill Component focuses on imparting *hands on skills* training in the state of the art workshops and laboratories at each School during the first six months in

the University and on the job training during the six-month industrial internship every alternate semester.

The skill component covered during the in-house semesters conducted at the University is assessed by the University. The skill component at the end of the industrial semester is assessed by a joint assessment board comprising representatives of the University, the Sector Skill Council concerned and the Industry where the student undergoes his internship. This is done as per the required NSQF level.

The M.Voc programme comprising 100 credits of two years' duration can be pursued after B. Voc or its equivalent. Of the four semesters, the students study for two semesters at the University and two in the industry as interns. The components of *General Education* and Skills are assessed in a manner similar to that for B.Voc.

Grading System

Based on the assessment as stated above, the students are awarded grades, viz., O, A+, A, B+, B, C, P, and F as per the 10-point grading system recommended by the UGC. A Relative grading system based on the statistical analysis of the total marks using Mean (m) and standard deviation (σ) is adopted for award of grades if the number of students for the subject is 30 or more. However, Absolute grading system is followed if the total number of students for a subject is less than 30.

The credits are awarded in terms of NSQF levels and are as follows:

Award	NSQF Level	Duration	Skill Component Credits	General Education Component Credits	Total Credits
Certificate	4	One Semester	18	12	30
Diploma	5	Two Semesters	36	24	60
Advanced Diploma	6	Four Semesters	72	48	120
B.Voc	7	Six Semesters	108	72	180

Academic Activities of the Faculty-2019

- **Prof. Kumkum Garg** participated as one of the panelists in ET Now “Leaders of Tomorrow” TV series telecast on 16.04.2019 on the subject of 'Startup Ecosystem in Jaipur'

Research Papers Presented in Conferences

❖ **Ms. S. Glory Swarupa**

- Presented a research paper at the International Conference on *Vision for Agriculture Development and Emerging Challenges*

Date : 17-19 February, 2019

Venue : Krishi Vigyan Kendra, Madhubani, Bihar

Title of the Paper : Case Study of Recognition of Prior Learning (RPL) in Fisheries Sector: Challenges & Mitigation Strategies (**Awarded Best Research Paper**)

❖ **Mr. Kantaprasad**

- Presented research paper at the International Conference on *Advances in Mechanical Engineering and Nanotechnology*. - ICAMEN 2019

Venue : Manipal University, Jaipur,

Date : 8-9 March, 2019

Title of paper : A Review on Methods and Materials for Optimizing Thermionic Regeneration System

❖ **Dr. Kiran Shekhawat**

- Presented research paper at the International Conference on *Emerging Techniques in Engineering and Applied Sciences*

Venue : Rajasthan College of Engineering for Women, Jaipur, Rajasthan

Date : 15- 16 January, 2019

Title of paper : Communicative Language Technique: An Emerging Trend for Enhancing Communicative Competence of the ESL Students

❖ **Mr. Mahendra Singh Shekhawat**

- Presented research paper at the Conference on *New Frontiers in Engineering, Science and Technology (NFEST 2019)*

Venue : NIT Kurukshetra, Haryana

Date : 18-22 February, 2019

Title of paper : Macro & Micro feature Fabrication on External Cylindrical Surfaces using Perimetric Electrical Discharge Texturing

❖ **Dr. Sangeetha Noval**

- Presented research paper at the International Conference on *Emerging Techniques in Engineering and Applied Sciences*

Venue : Rajasthan College of Engineering for Women, Jaipur, Rajasthan

Date : 15- 16 January, 2019

Title of paper : Communicative Language Technique: An Emerging Trend for Enhancing Communicative Competence of the ESL Students (**Received best paper presenter award**).

- Presented research paper at the International Conference on *Comparative Literature: For a Harmonious World*

Venue : OP Jindal Global University, Sonapat, Haryana

Date : 1-2 March, 2019

Title of the paper : A Psychological Study of Monisha in Anita Desai's *Voices in the City: A Humanistic Dimension*

- Presented research paper at the International Conference on *Ethics and Human Values: A Global Challenge*

Venue : Jaipur National University, Jaipur

Date : 18-20 April, 2019

Title of the paper : Wordsworth's *Daffodils* and Frost's *Stopping by Woods on a Snowy Evening: Poems as Value Educators*

❖ **Dr. Sumitra Singar**

- Presented research paper at the International Conference on *Signal Processing and Integrated Networks (SPIN)*

Venue : Amity University, Noida

Date : 7-8 March, 2019

Title of the Paper : Low Glitch DET-FF for Low Power Integrated Applications

❖ **Dr. Prerna Srivastava**

- Presented research paper at the International Conference on *Emerging Techniques in Engineering and Applied Sciences*

Venue : Rajasthan College of Engineering for Women, Jaipur, Rajasthan

Date : 15- 16 January, 2019

Title of paper : Teaching English Language to ESL and EFL learners : Emerging Trends and Strategies

- Presented research paper at the International Conference on *Comparative Literature: For a Harmonious World*

Venue : OP Jindal Global University, Sonapat, Haryana

Date : 1-2 March, 2019

Title of the paper : Thematic Elements in Mahesh Dattani's *Where there is a Will and Bravely Fought the Queen*

- Presented research paper at the International Conference on *Ethics and Human Values: A Global Challenge*

Venue : Jaipur National University, Jaipur

Date : 18-20 April, 2019

Title of the paper : *Humanism and Dignity in Dattani's Ek Alag Mausam*

❖ **Ms. Vijayalakshmi Bhat**

- Presented research paper at the International conference on *Comparative literature: For a Harmonious World*

Venue : O P Jindal Global University, Sonipat, Haryana

Date: 1-2 March, 2019

Title of the paper : Thematic Elements in Mahesh Dattani's *Where there is a Will and Bravely Fought the Queen*

- Presented research paper at the International Conference on Ethics and Human Values: *A Global Challenge*

Venue : Jaipur National University, Jaipur

Date: 18-20 April, 2019

Title of the paper : Ruskin Bond's Stories: Friendship as a Fundamental Value for Character Building

Book Published

Sumitra Singar, N. K. Joshi and P. K. Ghosh, Low Power Fault Tolerant Latches and Flip-Flops-Design and performance Analysis, LAMBERT Academic Publishing, ISBN: 978-613-9-45302-3, Pages 152, Feb 2019.

Ph.D. Scholars @ BSDU

BSDU started its Ph. D. Programme in June 2017. Subsequently every semester there has been an overwhelming response to the Ph.D. Programme offered by BSDU. At present, there are 27 research scholars enrolled in the various Schools of the University. The details are as given below:

Session 2017-18		
S.No.	Name	Research Area / Topic
1	Narender Singh	Development of Engineered Wood with Desired Properties using Industrial Wastes
2	Kodihal Kantaprasad Suresh	Design and Development of a Thermionic Regeneration System for Waste Heat Recovery in Hybrid Electric Vehicle Applying Reverse Engineering
3	Shashi Sharma	Machine Learning Techniques for Analysis of Student Potential and Performance in Technical Programs
4	Deepak Singh	Investigation of Smart Structural Enclosure for Batteries Manufactured with Auto Adaptive Material for the Application of Electric Vehicle
5	Antima Sharma	Impact of Informal Learning at Workplace of BPO Employees for Skill Enhancement

6	Kritika Tekwani	Impact of Goods and Services Tax on Exporters of Handicrafts in Jaipur
7	Vijayalakshmi Bhat	A Critical Study of Ruskin Bond's Writings: A Viable Resource for Raising Value Consciousness
8	Mahak Bhatia	Optimal Crop Allocation in Rajasthan Farming – Agriculture Skills Approach
9	Sanchita Sinha	Impact of Flipped Technology Based Instructional Model on Student Performance & Self Efficacy in Communication Skills of Students in Skill Universities of Jaipur
10	Hilala Ariyana	E-Resource Management by Adopting Semantic Web Tools: An Approach Towards ERMS for Libraries
11	Ram Kumar Singh Mahla	Skill Education at Grass Root Level: A Study of the Challenges Faced by the Implementing Agencies
12	Smriti Nath	

Session 2018-19

S.No.	Name	Research Area / Topic
1	Babita Kumari Jain	Electrical Load Prediction
2	Meenakshi Chauhan	Piezoelectric Materials
3	Ashish Kumar Sharma	Security in IOT
4	Vikas Kumar	IOT Security
5	Neeraj Sharma	OCR/AI
6	Vijay Singh Shekhawat	Use of Self Motivated Individuals to Influence Groups to Enhance Group Performance
7	Deepraj Walia	Food & Nutrition
8	Pooja Sharma	Quality of Education in Skills University
9	S Glory Swarupa	Development of Entrepreneurial Competencies Through Skills Education.

Session 2019-20

S.No.	Name	Research Area / Topic
1	Amit Sharma	Yet to be finalized
2	Sunil Kumar Pandey	Yet to be finalized
3	Ram Bilas Agrawal	Yet to be finalized
4	Lala Ram Choudhary	Yet to be finalized
5	Vandana Singh	Yet to be finalized
6	Manisha Sheoran	Yet to be finalized

HR Communiqué

The BSDU family is growing and progressing at a rapid rate. The details from the HR's Desk have been furnished below:

New Joinings

The following faculty have joined BSDU

- ❖ **Dr. Ritwik Basu** on 01.1.2019 as Assistant Professor in the School of Manufacturing Skills.
- ❖ **Dr. Sandeep Gupta** on 21.1.2019 as Assistant Professor in the School of Computing Skills.
- ❖ **Dr. Shishir Chandra Bhaduri** on 05.1.2019 as Professor & Principal in the School of HVAC & R Skills.
- ❖ **Dr. Devanjan Bhattacharya** on 05.3.2019 as Associate Professor in the School of Computing Skills.
- ❖ **Dr. Anurag** on 11.3.2019 as Professor & Principal in the School of Computing Skills.
- ❖ **Dr. Binit Kumar Jha** on 15.4.2019 as Professor & Principal in the School of Manufacturing Skills.
- ❖ **Dr. Anil Rana** on 16.4.2019 as Professor & Principal in the School of Carpenter Skills.
- ❖ **Dr. Ritu Tak** on 10.5.2019 as Assistant Professor in the School of Electrical Skills.
- ❖ **Chef Saurabh Sharma** on 15.5.2019 as Associate Professor in the School of Hospitality and Tourism Skills.

In addition to the above mentioned eight faculty, seven trainers and one driver also joined BSDU

- ❖ **Mr. Sudhir Kumar Yadav**, Trainer-II, School of Manufacturing Skills
- ❖ **Mr. Akram Razza Mansuri**, Junior Trainer, School of Manufacturing Skills
- ❖ **Mr. Pradeep Singh Chouhan**, Junior Trainer, School of Manufacturing Skills
- ❖ **Mr. Akash Gade**, Junior Trainer, School of Manufacturing Skills

- ❖ **Mr. Pranjal Maheshwari**, Junior Trainer, School of Manufacturing Skills
- ❖ **Mr. Koshal Kishor Nagar**, Junior Trainer, School of Manufacturing Skills
- ❖ **Mr. Pawan Sharma**, Junior Trainer, in the School of Manufacturing Skills
- ❖ **Mr. Gopal Singh**, Driver

Upgradation of Qualification of BSDU Faculty

- ❖ **Dr. Soma Kumawat**, Assistant Professor in the School of IT/Networking Skills has been awarded with Ph.D. degree on *New Constructions of Optical Codes and Analysis for SAC-OCDMA System* from MNIT Jaipur.
- ❖ **Dr. Sandeep Gupta**, Assistant Professor in the School of Computing Skills has been awarded with Ph.D. degree on *Efficacy of Bismuth-based Nanostructures for Hydrogen Storage, Heavy Metal Ion Sensing and Optical Filters* from Amity University, Rajasthan.
- ❖ **Dr. Pancham Kumar**, Assistant Professor in the School of Electrical Skills has been awarded with Ph.D. degree on *Investigation of Electronic Structure and Optical Properties of Materials Used in Solar Photovoltaic Cells* from Manipal University, Jaipur.
- ❖ **Dr. Sujil A.**, Assistant Professor in the School of Electrical Skills was awarded with Ph. D. degree on *Mart Microgrid Management using Multi Agent System* from the Department of Electrical Engineering, Malviya National Institute of Technology, Jaipur.
- ❖ **Col Raj Kumar**, Professor in the School of Telecom Skills, was conferred with Doctor of Excellence Honoris Causa by University of Entrepreneurship & Technology USA for Excellence in the field of Telecommunication.
- ❖ **Ms. Kritika Tekwani**, Research Scholar (Management) cleared NET 2018.

Promotions

- ❖ **Dr. Pancham Kumar** promoted from AP-II to AP-I (on completing Ph.D.)
- ❖ **Mr. Anirudh Singh** promoted from Trainer to Trainer-I (on completing 2 years as Trainer)
- ❖ **Mr. Tanuj Narula** promoted to Trainer-II in School of Health Care Skills

Introduction of Yearly Performance Appraisal System and Increment

A new form of Yearly Performance Appraisal System and Increment has been framed and supplied to the appraisee and the appraiser; based on the performance of the School and the individual, incentives will be awarded.

Educational Loans and Insurance facilities

The Finance Department of BSDU is responsible for the maintenance of the University's operating budget. These

responsibilities include financial planning, forecasting, budget consolidation, and the management of the budget reporting systems.

Finance department has continuously worked to ensure that the University meets its financial obligations for sustainability and for expansion as a higher learning institution. The strategic objective of the finance department is to improve financial sustainability through diversification and efficient management of University resources. It aims to provide high quality management information to support decision making and to provide efficient transaction services for students, staff and creditors, as well as to establish a reporting and control framework to support all the University's financial activities.

Bank Loan Facility

Bank of India has consented to provide hassle free education loan with minimum paperwork formalities to BSDU students. The finance department is also trying to get more tie-ups with other banks for offering on the spot education loans to students at the time of admission in BSDU.

Employees Insurance Policy

Finance department increased the cover under the Medicare policy scheme of employees. From the financial year 2019-20 onwards employees and their dependents (Self+spouse+2 children) will also be covered under the Group Medicare scheme. The finance department also increased the coverage of personal accident policy from 5 lakhs to 10 Lakhs of each employee of BSDU.

Finance department is committed to providing the highest levels of financial services to its students and employees.

BSDU towards Worldskills

Worldskills is the global hub for skills excellence and development. *Worldskills* brings youth, industries, and educators together to give youth the chance to compete, experience, and learn how to become the best in their skill of choice. From the traditional trades to multi-skilled technology careers in the industry and service sectors supported by partners, industries, governments, volunteers, and educational institutions, *Worldskills* has vision to improve the world through the power of skills, to raise the profile and recognition of skilled people, and show how important skills are in achieving economic growth and personal success. It has built a movement that is changing the lives of young people through skills. Eighty member organizations reach two-thirds of the world's population and create measurable impact at every level. They build the confidence of millions of young people, empowering communities and fueling

economies. *Worldskills* organizes the largest International skill competition once every two years. More than 1300 contestants below the age of 23, compete for gold, silver and bronze medals, in over 50 skills. The competition is held over a span of four days.

Worldskills India

Worldskills India is an initiative of the National Skill Development Corporation (NSDC) under the Ministry of Skill Development and Entrepreneurship, Government of India. NSDC, through its *Worldskills* India initiative, has been leading the country's participation at *Worldskills* International competitions since 2007. In this short span of time Indians have proved themselves in skill by winning medals at international levels in different trades.

BSDU in Skill Competition

Bhartiya Skill Development University participated in *Indiaskill 2018* and was appreciated for the outstanding performance in India skills 2018 by NSDC and MSDE. The School of Carpenter Skills organised *Euroskill 2018* qualifier competition in Joinery trade and Boot camp in Joinery and cabinet making trade for competitors from various states in India. Three students from the School of Carpenter Skills under the able guidance of Mr. Narendra Singh Rathore, faculty, School of Carpenter Skills, participated in the National level *Indiaskill 2018* in Joinery and Cabinet Making trade and won three medals including Gold medal in Joinery. This shows our commitment to *Worldskills International 2019* and is a matter of pride that we have taken the first step in higher education in skill area in India.

The upcoming 45th *Worldskills* Competition will be hosted by Kazan, Russia in Aug 2019. The *Worldskills* movement has become much more than an international competition. The organization is helping young people around the world change their lives through vocational skills.

Institution Innovation Council at BSDU

The *Institution Innovation Council* (IIC) of BSDU was registered on 21 November 2018 at AICTE, New Delhi and officially launched at BSDU under the aegis of the *School of Entrepreneurship Skills* on 1 February 2019 by Shri Ashok Chandna, Hon'ble Minister for Skills, Entrepreneurship, Sports & Youth Affairs, (Independent Charge) Govt. of Rajasthan.

Ministry of Human Resource Development (MHRD), Govt. of India has established MHRD's Innovation Cell (MIC) to systematically foster the culture of Innovation amongst all Higher Education Institutions (HEIs). MIC has envisioned creation of Institution's Innovation Council (IICs) across selected HEIs.



BSDU was granted an Institution Innovation Council (IIC)

- To create a vibrant local innovation ecosystem
- Start-up/ entrepreneurship supporting Mechanism
- Prepare the Institute for Atal Ranking of Institutions on Innovation Achievements Framework (ARRIA)
- Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas
- Develop better Cognitive Ability amongst Students

Innovative Activities Conducted

- Four Webinars on India First Leadership Talk Series
- Awareness programme on Intellectual Property Rights (IPR)
- Four proposals on Innovative Products

MoU with DISHA

BSDU signed an MoU with an NGO- DISHA International Foundation- in order to promote skill-based education. The MoU has been signed with an aim to promote skill-based education, training, student exchange programmes, work on funded research and development projects, knowledge exchange, faculty mobility and generating employability. Mr. Kerron Vaishnav, Founder, DISHA International Foundation and Dr. (Brig.) Surjit Singh Pabla, Vice Chancellor, BSDU validated the objectives highlighted under the MoU along with other dignitary guests.

As said by Prof. GMJ Bhat, the MoU between DISHA Foundation and BSDU will provide students of BSDU with internships and placements, along with student exchange programs which will help students get training abroad. DISHA will also help students of BSDU in developing and submitting research-related projects including those with the European Commission.

Dr. (Brig.) Surjit Singh Pabla, Vice Chancellor, BSDU, said, “Companies often have to train employees before they begin working, as most people working with machinery have no prior experience or training. Companies, hence, end up spending their time and money on training these individual.



At BSDU, we provide our students with internships and training in well-established companies. DISHA Foundation will help us getting more such opportunities in training students and placing them in companies, along with opportunities to train abroad.”

Faculty of Informatics & Robotics

- The ERP System is being finalized and the Digital Library System *DSpace* is being installed in the Library.
- Three Robots from ABB have been installed in the Robotics lab of the *School of Computing Skills*. Three more Robots, purchased from TAL Manufacturing Systems Pune, will be installed in the next few weeks



Fig.Robot for welding industry

International Women's Day at BSDU

International Women's Day is celebrated on 8th March in many countries around the world. It is a day when women are recognized for their achievements without regard to divisions, whether national, ethnic, linguistic, cultural, economic or political. International Women's Day first emerged from the activities of labour movements at the turn of the twentieth century in North America and across Europe.

Since those early years, International Women's Day has assumed a new global dimension for women in developed and developing countries alike. The growing international women's movement, which has been strengthened by four global United Nations women's conferences, has helped make the commemoration a rallying point to build support for women's rights and participation in the political and economic arenas.



This special day was celebrated at BSDU with a get together of all women employees. The women shared their experiences and thoughts on the significance of International Women's Day. Mementos and gifts were given to one and all.

B.Voc. in Building Maintenance Skills

Prof. Iqraz Nabi Khan, Principal
School of Construction Skills

All living beings need shelter from hostile weather conditions, for comfort and safety. This can be achieved at an affordable price by proper planning, execution (construction) and maintenance. With the growing needs and advancement in construction materials and techniques, traditional methods of constructing and maintaining buildings have become obsolete.

With the increase in demand of multi-storied buildings and related amenities / services, there is an increasing demand for skilled persons to maintain structures and building services. It requires services of skilled persons of different fields. Keeping this in view, B.Voc. Programme in *Building Maintenance Skills* is being offered. The programme is spread over three years and has multiple exit and multiple entry facilities as per BSDU policy.

The School of *Building Maintenance Skills* aims to develop, establish, standardise and sustain industry competency frameworks, Skill levels, Occupational standards, Build, Create and Deliver Capacity, Investment and Skilling Outcomes, which shall meet or exceed customer expectation through ethical, transparent

and effective management of the construction and Infrastructure Industry with requisite safety measures.

Infrastructure

The University has one covered construction yard of about 1000 m² covered area and other open to sky construction yard of about 1500 m² area, where students learn various skills.

In addition, three multi-storey buildings under construction aim to provide full scale exposure and application of the skill learned in construction yards. Students are trained from basics up to final finishing of a structure like survey, layout, excavation, different types of foundations, masonry, plastering, sanitation works, painting and other finishing and fixtures.



Students acquire skills in different type of masonry like clay bricks, fly ash bricks, perforated bricks, concrete blocks, hollow concrete blocks and the modern dry masonry walls used for erecting light weight partitions.

Different type of plasters and pointing suiting to the different type of masonry and other factors are also learnt. Students also learn about different types of roofing and ceilings as well as different types of scaffolding and formwork. The School imparts training in bar bending, cladding, ordinary cement flooring, use of marble, granite, stone, tiles, etc. for walls and floors.

In addition to the above, the University has the facility for skill development in pavement (rigid and flexible) construction, plumbing and façade installation.

School of HVAC & R Skills

Prof. Shishir Chandra Bhaduri,
Principal

The School of HVAC & R Skills imparts technical skills and hands-on training in the area of refrigeration and air conditioning. The programme is designed to introduce students to the operation of today's HVAC & R system by giving them a comprehensive understanding- from basic to advanced- of various systems like window air conditioning, Room air conditioning, VRV, Ductable and chiller. Students in this programme acquire the necessary skills of installation, commissioning, service, maintenance and troubleshooting of HVAC & R systems. At present, the School offers a 3-year undergraduate program (B. Voc.), 2-year M. Voc programme and Ph.D. in HVAC & R. The B. Voc. and M. Voc. programmes are modular in nature with multiple exit points at Certificate, Diploma, Advanced Diploma, B. Voc. and M. Voc.

Train the Trainer Programme

The School is in collaboration with various industries for providing skills to the trainers/faculty. The trainers/faculty underwent industrial training at the Daikin field service technician training from 25-26 February 2019.

Ashrae Student Chapter

The ASHRAE student chapter created by faculty, trainers and students of School of HVAC & R skills at the University provides the latest information, new technology, new products and new research articles in the field of Heating, Ventilation, Air Conditioning and Refrigeration.



Government of India Project

The Government of India has assigned the School to train 1 lakh skilled technicians in the field of air conditioning as the School of HVAC & R is an authorized training centre. In addition, the School also creates certified professionals in the field of HVAC & R.



Inauguration of the Workshop in the School of Sheet and Metal Cutting

Along with signing the MoU, BSDU also inaugurated its latest Metal Construction Skills workshop. As part of the course, students will primarily learn to work with bulk metal. Students will get hands-on training to process sheet metal performing grilling, filing and bending. Students will learn new techniques of metal construction and working with bulk metal, including how to roll, cut, deep draw on bulk metal. For the course, the university will install special machinery, including welding machines, cutting machine, roller-bending machine, deep drawing machine, among others. Currently, the course has 30 seats available.

School of Hospitality & Tourism Skills

Ms. Marietta Nüssli,
Project Manager

The School of *Hospitality & Tourism Skills* will be functional from August 2019. It proposes to train its students to offer guests the best possible service, with the knowledge that a positive, appreciative and friendly attitude is the best approach for success. Theory and practice are closely linked in our School, as whatever has been learnt is consistently used in practice and new and practical experiences flow back into the lessons. This interplay results in a permanent development process which qualifies the graduates of our school to face great challenges.

Contact Classes for the students of Industrial Semester

School of General Education

With the aim of providing opportunities for the holistic development of the students and in adherence to the Swiss Dual system of Education for Skill Development the students spend one semester at the University and the next in the industry for hands on training and experience. During this semester, the School of General Education provides study material of the various subjects included in their curriculum. The study material is prepared by the faculty of the school and handed over to their respective Schools to be distributed to the students.

As a part of their internal assessment, the students during their stay in the industry submit 3 assignments on the basis of the study material given to them. After the completion of their industry training for 6 months, the students attend contact classes conducted by the School of General Education towards the preparation of their End-sem. examination. The School of General Education conducts contact classes simultaneously for the II, IV and VI semester students.

General Articles

Importance of Career Planning and Its Essentials

Prof. Surat Singh, Principal,
School of General Education

What is Career Planning?

Career planning is the continuous process of thinking about personal interests, values, skills and preferences. It is exploring life and the learning options available and ensuring that work fits with personal circumstances, interest and ability. Career planning helps block out all distractions giving time to focus on career. Career planning is not a one-time process, but a continuous journey that involves the following:

- Knowing the self and thinking about individual interests, values and skills
- Exploring life, work and the learning options available
- Making decisions by comparing options and narrowing down choices
- Implementing plans

Career planning is crucial as the future of an individual depends upon making the right choice. Decision in career planning gives the much needed direction providing clarity about the future. Career planning provides awareness of strengths and weaknesses, skills and knowledge required for success at the workplace.

Career plans can be modified as time progresses depending on growth at the personal and professional level. Plans are about being focussed so that goals can be achieved within a set-time frame. Achieving goals gives a sense of accomplishment aiding in reaching the final objective.

Computer skills, learning and improving communication skills and other soft-skills are needed in order to achieve the fixed goals. Networking with experienced professionals aid in achieving career plans.

Essentials of Career Planning

The following qualities help in career planning:

- Positive Attitude and Confidence
- Learning from Others
- Creative Ability
- Remaining Well Informed
- Clarity of Thought.
- Proper Planning
- Thriving in Uncertainty
- Self-Promotion

ARYABHATTA- The Man Who Knew Infinity

Dr. Rakesh Choudhary, Assistant Professor
(Mathematics), School of General Education

Aryabhatta was an extraordinary teacher and scholar who had immense knowledge of Mathematics and Astronomy. He suggested the *Heliocentric Theory* which proved that the sun is located in the centre of the solar system and all the planets revolve around it. In fact, he made this discovery long before Copernicus made this discovery in the West.

Aryabhatta was born in Kerala and lived from 476 AD to 550 AD. He completed his education from the ancient University of Nalanda and later he moved to Bihar and continued his studies in the great centre of learning located in close proximity to Kusumapura in Bihar. He lived in Taregana District in Bihar in the late 5th and early 6th century.

His Contributions

- The calculations and deductions in astronomy suggested by Aryabhatta are extraordinary as he didn't have any modern equipment or instrument to do it.
- He deduced that the earth is round and rotates along its own axis, which causes the existence of day and night.
- He stated that the moon has no light and shines because it reflects light from the sun.
- He proved wrong the false belief that eclipse is caused because of the shadows formed by the shadows cast by the earth and the moon.
- This great astronomer wrote the famous treatise *Aryabhatiya*, which was based on astronomy in 499 AD. This treatise was acknowledged as a masterpiece. In honour of this excellent work Aryabhatta was made head of the Nalanda University by the Gupta ruler Buddhagupta.
- His contribution to Mathematics is unmatched and cannot be ignored, as he was the one who deduced the approximate value of pi, which he found to be 3.14.
- He derived the correct formulas for calculating the areas of triangles and circles. He also played a very important role in the formation of the table of Sines.
- He played a major role in determining the place value system and discovering zero. He also worked on the summation series of square roots and cube roots.
- He calculated the sidereal rotation, which is the rotation of the earth in relation to the fixed stars.

For his extraordinary works and contributions to Mathematics and Astronomy, India's first satellite was named as *Aryabhatta*. Aryabhatta Research Institute of Observational Sciences near Nainital and the Aryabhatta Knowledge University in Patna, in India are also named after him.

Macro & Micro feature Fabrication on External Cylindrical Surfaces using Perimetric Electrical Discharge Texturing

Mr. Mahendra Singh Shekhawat, Associate Prof.,
School of Manufacturing Skills

Machining of thin walled lesser stiff rotationally symmetric components is quite challenging. Electric discharge texturing is one among many of the material removing texture fabrication techniques. Extensive research has been performed for wire electric discharge machining by various researchers but so far very little effort has been made for electric discharge texturing on cylindrical surface. No one has attempted for texturing on thin walled cylindrical components).

A Perimetric Work Support & Drive System (PWSDS) was developed at BSDU for Die sinker EDM to perform texturing on thin walled difficult to machine circular components used in aviation, automobile and heat transfer applications. Experimental setup was prepared for ENC-35 (Die sinker EDM). Trial experiments were performed at low current on Aluminium alloy (EN AW-6082- AlSi1MgMn) tube using copper electrode. Process was investigated for the effect of current and current density on MRR, surface roughness and geometrical accuracies (circularity, concentricity).

The dielectric Dearomatized hydrocarbon fluid EDM100 was applied through nozzle to flush out the material removed by melting and evaporation. It was found that very small current quickly removes a very thin layer of the surface material without much damage to the base metal and improves the surface finish. The circularity is found to be dependent upon the run out accuracy of the spinning drive wheel. PEDT proves out to be most promising method of metal removing texturing technique specially for lesser stiff typical components.

Digital Library: Initiative in India

Dr. Bhoop Singh, Asst. Prof,
Knowledge Resource Centre

Digital technology and internet communication has led to the evolution of the traditional library to e-library or digital library. The requirement of digital library is increasing due to heavy demand for information, limitations of available resources, searching difficulties in traditional libraries, low cost of technology and lack of space to build a traditional library.

In India the following initiatives have been undertaken for the digitization of libraries:

Digital Library of India (www.dli.gov.in)

This digital library project started in 2000 to archive artistic and scientific works to make them available over the internet. Currently it has approximately 6,00,000 books with 20,000,000 pages in pdf format.

National Digital Library of India (<http://ndl.iitkgp.ac.in>)

The NDL is a pilot project by the Ministry of Human Resource of India under its National Mission on education through Information & Communication Technology (NMEICT). It has been entrusted to Indian Institute of Technology (IIT) Kharagpur to set up a National Digital Library (NDL) to provide academic support to all researchers and readers, being suitable for all popular forums of access devices including those for differently-abled learners.

Shodhganga (www.shodhganga.inflibnet.ac.in)

This is a digital repository of Indian electronic thesis and dissertations set up by the INFLIBNET Centre. The notification of the UGC regulation 2016, dated 5 May 2016, mandates submission of electronic version of thesis and dissertation by scholars in Universities to facilitate open access to Indian thesis and dissertation to the academic community worldwide. Currently 210583 full text thesis and 6000 synopses have been uploaded by more than 381 Universities from different regions of India.

Digital Content for Learners:

The Government of India, with coordination of well-known institutions, has initiated the development of digital content for learners. These are:

E-PG Pathshala (<http://epgp.inflibnet.ac.in>)

It is initiated by MHRD under its National Mission on education through ICT (NME-ICT) being executed by the UGC.

NPTEL (<https://nptel.ac.in>)

National Program on Technology Enhanced Learning (NPTEL) is an initiative by seven IIT's and IISc for creating content in engineering and science, based on the model curriculum suggested by AICTE New Delhi and the syllabi of major affiliated Universities in India.

E-Shodhsindhu (<http://www.inflibnet.ac.in/ess>)

It provides access to more than 91 centrally funded institutions (CFTs), 217 Universities, 108 Technical Institutions and more than 3000 colleges in India.

Digital libraries provide an effective means to provide learning resources to students, faculty and information users. Today we have more than 800 Universities, approximately 40,000 colleges and about 1.6 million schools in our country. India needs digitization of traditional libraries for growth and development in education and research.

Mobile Technology Versus Libraries

Dr. Deepmala, Asst. Prof.,
Knowledge Resource Centre

Mobile Technology has now come up with the trend of *Libraries in Hand*. Librarians are in move to determine how these devices are affecting information access. Since

Scholars' Corner

Informal Learning at Workplace

Ms. Antima Sharma, Management

An employee spends eight to nine hours of a day at the work place. During those hours the employee learns through self-learning and learning from others. This type of learning is called informal learning. The ROA(Netherlands, the education and employment research Centre) report states that on an average an employee spends 505 hours a year in learning;494 informally, 21 hours formally, in a ratio of 96: 4 %. This statistic shows that most of the learning takes place in the form of informal learning and plays a major role in skill enhancement of employees.

Organizations hire employees on the basis of their technical knowledge but technology is changing so rapidly that they cannot afford to recruit workers frequently or to equip them with regular formal training programmes to meet the technical upgradation. Along with technical skills an employee needs to possess soft skills and human skills which are very important for both the organization and the employee.

The management can train employees in technical skills but their soft skills and human skills (i.e. interpersonal skills, presentation skills, human values, organizational skills etc.) cannot be developed through formal learning,as formal learning is one way learning or based on top to down approach. Unlike formal learning, informal learning happens from all directions i.e., 360° (shown in Fig.) where an employee can learn from self and others.

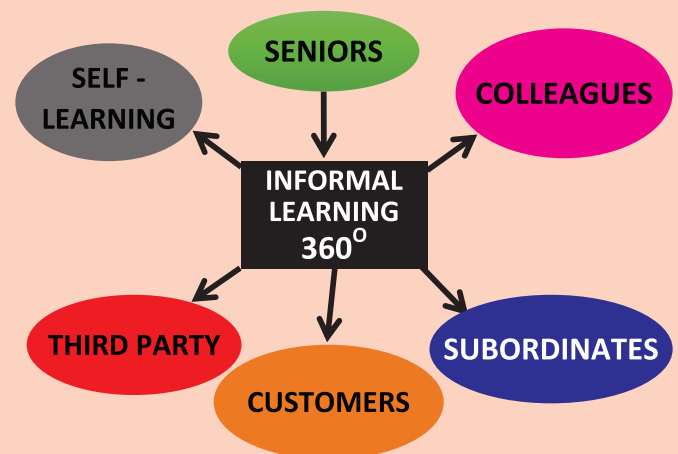


Fig. : 360° Model of Informal learning at workplace

When learning flows from all directions at the workplace, it brings development in the skills of employees. Informal learning at workplace is not acknowledged but it takes

Mobiles are personal devices, users want instant results and therefore find mobile- search more user friendly.

Library users are using their cell phones and other mobile devices for searching and browsing the web, reading magazines and books more than merely talking and texting. Libraries today are covering most of the technologies given by mobile industry and mobilizing library contents in a portable form suitable for the small screen and delivering short services in the form of contents/information with device's multiple search features.

As all content is not optimized for the mobile network, the Transcoded Web is to transcribing content to fit into a mobile device. Librarians will need to become proficient in using these devices to enable users to access them anywhere.

The publishers are now converting content into e-book formats for mobile devices (ranging from Kindle, Sony's e-book reader, cell phones, and other e-book readers). To create a positive and useful experience for mobile internet browsers, the mobile websites present brief and simple versions of the books in order to facilitate easy use on small screens. Studies declare that users mostly access E-mail and download ring tones compared to searching for news, sports and weather reports, travel information, wallpaper downloads, payment of bills, shopping etc.

More and more changes are expected in the field of mobile technology and its application in the libraries. The day is not far when phones will be used to read barcodes or RFIDs in the library and OPACs and to communicate with users for holds, fines, late notices, alerts etc.

In the coming days, the librarian has to understand the capabilities and potentials of mobile technology and its use in libraries to provide quality service to users.

Geo-informatics as a Skill Development Tool

Dr. Devanjan Bhattacharya, Associate Prof.,
School of Computing Skills

The field of geo-informatics deals with location data such as latitude, longitude and elevation and how to represent and process such data into meaningful information for decision making purposes. It has enormous potential and applications as geo-spatial component of data is becoming ubiquitous with any data collected, and therefore has to be utilized for more information assessment. In the domain of Computing Skills, geo-informatics can have a big role to play by delivering skills that empower software in mobile devices, navigation, autonomous vehicles, self-driving automobiles, gaming, web and mobile mapping, security, surveillance, resource and disaster management tools. Geo-informatics is expanding by the day and touches all aspects of development. India has an early start in this field and it is necessary to build on the lead with more trained manpower in the field.

place in many ways directly or indirectly. Some of the ways are: trial and error, own experiences, on job learning, huddles, buddy-up, and job shadowing which helps to develop employee's technical, softskills and human skills.

Considering the significance of informal learning at the workplace, organizations should create platforms for employees where they can interact with colleagues to enhance their skills.

Importance of Mathematics in Agriculture Sector

Ms.Mahak Bhatia, Mathematics

Mathematics is methodological application of matter. It makes our life easier as according to scientific studies, it is simpler to interpret the data as compared to theoretical aspects. Certain qualities nurtured by mathematicians include power of reasoning, creativity, problem solving efficiency and even effective communications skills. Mathematics is the cradle of all creations as human beings, animals, insects and all other species in one way or other apply mathematics in their daily life. The dwellings of the snails, spiders and honey bees are some of the common examples of symmetry in nature.

The first dimension of mathematics is its pure aspect. Mathematics is an art that expresses beauty in the form of axioms, theorems, logical or numerical relations. It attracts the researcher because of its logical perfections by being one of the most compelling examples of the human capacity for analysis.

Mathematics plays a major role the agriculture sector. Mathematical models have been developed by researchers in order to determine its impact on farm activities. Mathematical models have been developed not only to describe the order of events in a cropping system, but also to scrutinize each of these events.

The mathematical models can be used in different ways within each one of the farm activities. They can help us to better understand the operation of a real system and the interactions of its main components. Thus, they are excellent forecast mechanisms. The important uses of mathematical models in agricultural sciences can be (i) Analysis of observed responses in plant growth as a function of certain factors, to increase our understanding of the crop growth and to provide direction in our research. (ii) Simulation of plant growth by models consisting of many interacting components and levels, as an aid for teaching and learning. (iii) Forecast of the plants response to certain climatic or management condition, as a tool for management and decision-making. Various kinds of models such as Statistical, Mechanistic, Deterministic, Stochastic, Dynamic and Staticsimulations are in use for assessing and predicting crop growth and yield. Crop growth model is an effective tool for predicting possible impacts of climatic change on

crop growth and yield. Crop growth models are useful for solving various practical problems in agriculture. Adequate human resource capacity has to be improved to develop and validate simulation models across the globe.

Entomologists, plant pathologists, agronomists, and mathematicians use a common language -the language of applied mathematics. It has been almost impossible to integrate all the factors that must be considered in determining the appropriateness of a pesticide application to a growing crop or the optimum timing of an irrigation. Few growers have the information to evaluate evapotranspiration, soil structure, wind velocity, relative humidity, water quality, soil moisture content, cost of water, value of the crop, and other factors in establishing an irrigation system.

Besides its scientific importance, the simulation of plant yield has practical application in the management of cropping systems, in the formation of stocks, in commercialization, in the making of agricultural policies and zoning, and in many other branches of agricultural activity. Before the model is applied for resource management, its accuracy needs to be tested within a given range of variables. Only then, it is wise to use the model to simulate the effects of different management techniques or environmental variations on the crop performance.

“Mathematics is the abstract key which turns the lock of the physical universe”

-John Polkinghome

Where do I get information resources for my research?

-Ms. Hilala Ariyana, Library Science

The first question for a researcher is, “Where do I get information resources?” This is not the problem of a single researcher, rather this is the major issue for every researcher either from academics or business. When we think of searching for information, the first thing that comes to mind is to search the internet through any search engine like Google, Yahoo, Bing, DuckDuckGo, etc. Most common among them is Google; most of us use the word “Google it” when we want to tell somebody to search for information.

Searching information from the internet is a good and easy way to get general information about any topic, place or people. If one wants to search for information for his/her class assignment, explore about the places and needs information about entertainment/books/ magazines for one's own information, then it is not necessary to check the authenticity of information. If the information is collected for the purpose of research and development in any field, there is a need to evaluate the reliability and validity of information source.

Authenticity, quality of information matters if we are

looking for information for research purposes as research needs authentic information. Googling random information sources has several drawbacks like getting least relevant information, possibility of unauthentic information, time-consuming, not all information sources being available, technical issues, lack of knowledge about the available resources.

For quality and reliable information, we must refer books, journal articles and magazines, etc. for our research purpose. These are available in both printed and electronic versions. In case of electronic resources, other sources of information are subject databases, indexing and abstracting databases, websites of publisher, openly available digital libraries, online directories, and library websites which are a treasure of information resources (subscribed, open and institutions own). These information sources will help in getting more information and save time which could be utilized in other beneficial tasks for research.

Vocational Education in Automotive as a career in India

Mr. Kantaprasad, Automotive Skills

Automotive is the world's most emerging field in the area of manufacturing, service and research. India, as one of the developing nations, contributes a lot in automotive development. The vehicles are getting advanced with high-tech features. Systems like advanced vehicle safety, comfort and performance are making headway. From heavy, more polluting, less efficient engines to light weight and supermassive, high performance vehicles, automotive is setting newer trends. New era of automotive is of electrification due to increasing pollution and decreasing available conventional energy sources. This increases the demand of skilled hands in Automotive sector.

Choosing a good career is a sort of anxiety as it impacts drastically in everyone's life. As far as automotive sector is considered, many people are afraid whether there will be good opportunities. In India, after 10th (SSC education) an enthusiast can start his/her career in automotive taking vocational HSC. Earlier it was difficult to pursue a degree in vocation. But now Vocational education is growing at a fast rate in India. The polytechnic institutions are getting approved for conducting diploma and degree courses in vocation. The future will be with skilled professionals only. Considering the same in automotive field, one must choose vocational education as a career. The opportunities are tremendous in service sector, manufacturing sector and even in research. It depends on particular skill set of an individual.

There is a misconception in society that a service sector doesn't have better opportunities. Whereas there are plenty of opportunities in automotive service. The Automotive vocational education is setting its base in

India. The traditional ITI, Diploma in engineering education lags behind as compared to B.Voc degree course in the course structure and skill enhancement. The imparted skill not only makes an individual employable but also strengthens him to get self-employed.

Amendments in Goods and Services Tax

Ms. Kritika Tekwani, Management

GST came into effect from July 1, 2017 through the implementation of the 101st amendment of the Constitution of India with the objectives of simplification in tax administration, fiscal structure, and United Indian Market. As it is a new indirect tax, GST Council is making changes as per the recommendation of producers, exporters, suppliers, etc. The 28th GST council meet held on 21 July 2018, introduced a simple GST return filing system for the registered taxpayers.

The GST Council has introduced *Sahaj* and *Sugam* forms for filing GST returns. Small taxpayers making only B2C supplies can file *Sahaj* returns. Taxpayers making B2B supplies or making B2C and B2B supplies, but having turnover of Rs 5 crore or less, have been given an option to file *Sugam* returns on quarterly basis. These new returns would have been implemented from 1 April 2019 as a pilot project, but now it will be implemented later on. As per the 32nd meeting of GST Council on 10th January 2019, the threshold limit has been increased to Rs. 40 Lakh from Rs. 20 Lakh only for the suppliers of goods, not for services. The threshold for registration for service providers would continue to be Rs. 20 lakhs and Rs. 10 lakhs in case of Special Category States. The threshold limit in the composition scheme has been increased from Rs. 1 Crore to Rs. 1.5 Crores.

The composition Scheme shall be made available for Suppliers of Services (or Mixed Suppliers) with a Tax Rate of 6% (3% CGST +3% SGST) having an annual turnover in the preceding financial year up to Rs. 50 lakhs. As per the 33rd meeting of GST Council held on 24 February 2019, GST shall be levied at effective GST rate of 5% without ITC on residential properties outside affordable segment and GST shall be levied at effective GST of 1% without ITC on affordable housing properties. The changes in the threshold limit, in the tax rate of mixed supply and in real estate sector have been effective from 1 April 2019.



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