



BHARTIYA SKILL  
DEVELOPMENT UNIVERSITY

# FACULTY OF MANUFACTURING SKILLS



Welcome to BSDU, a pioneering experiment in Indian higher education, especially in skill development. Modelled on the successful Swiss Dual System, BSDU fosters a dynamic synergy between academia, industry, and is committed to hands-on learning.

The University has established itself as a bold and innovative institution, pioneering the kind of skill education India's New Education Policy has now recommended for all higher education institutions in India. In this sense, BSDU represents the cutting edge of not just Indian, but global vocational education.

Once again, I welcome you all to explore our university and join us as we transform the landscape of skills-based education.

**DR. VIVEK BHANDARI**

President

Bhartiya Skill Development University



'BSDU REPRESENTS THE  
CUTTING EDGE OF NOT  
JUST INDIAN, BUT GLOBAL  
VOCATIONAL EDUCATION'



Welcome to the Faculty of Manufacturing Skills Education at BSDU Jaipur. Manufacturing skills play a significant role in enhancing safety, economic vitality, and overall standard of life. Our goal is to provide students with a balanced intellectual and practical experience that enables them to serve various industrial needs. We prepare graduates to become future leaders for industry, academia, government and the society at large, whose vision is founded upon fundamental knowledge, creative, analytical & practical skills, and ethics.

**DR. Binit Kumar Jha**

Dean, Faculty of Manufacturing Skills  
Bhartiya Skill Development University



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# FACULTY OF MANUFACTURING SKILLS

Entry into the B.Voc Program offers you an opportunity to enter into an industry-integrated program to become Manufacturing Specialist with the job roles of Production Supervisor, CNC Machinist / Programmer, CAD-CAM Engineer.

It is an industry-integrated program aligned with the world's most evolved Swiss system of Vocational Education (also called Swiss Dual System).

# SWISS DUAL SYSTEM

The Swiss Dual System of Vocational Education is a highly respected model globally renowned for its effectiveness in preparing individuals for successful careers in various industries. It combines practical, on-the-job training, with classroom-based learning thereby offering a unique blend of theoretical knowledge and hands-on experience.

- **Dual Structure:** The education system is structured around two main components: vocational school education and company-based training. Students spend part of their time in vocational schools, where they acquire theoretical and practical knowledge relevant to their chosen profession and the remaining time is spent in companies, where they undergo practical training under the guidance of experienced professionals.
- **Partnership with Industry:** Swiss vocational education programs are developed and implemented in close collaboration with industry partners and industry associations. This ensures that the curriculum is aligned with the current needs and requirements of the market.

- **Preparation for Life:** An important component of the curriculum includes education in life skills and critical thinking. These skills prepare students not only for the workplace, but also their long-term growth and success.

## HOW BSDU IS BETTER THAN ANY OTHER SKILL TRAINING COURSE

- Stipend during six-month industry internship in 2nd, 4th, and 6th semesters
- Training by experts/visiting faculties from Switzerland
- Multiple entry & exit system
- Hostel facility available separately for boys and girls
- Merit-based Scholarships & Fee Concessions to eligible students



# B.VOC IN MANUFACTURING SKILLS

The Program is a UGC-approved and industry-relevant curriculum that is updated regularly to reflect the latest advancements in the field.

The B.Voc Program leads to the development of Specialists in three industry verticals:

- Manufacturing Specialist in Production Supervision
- Manufacturing Specialist in CNC Machining/ Programming
- Manufacturing Specialist in CAD-CAM Engineering

**This Course is for students who**

- Are passionate about manufacturing technologies
- Have a strong desire to work in the manufacturing industry
- Are willing to learn, possess good problem-solving skills, and have a desire for hands-on work



## JOB ROLES & WORKPLACE TRAINING

### First Year

During the first year of workplace training, the student gains basic knowledge about the manufacturing industry in the role of Machine Operator.

### Second Year

In the second year of workplace training, the student reaches to higher roles such as CNC Programmer and Machine Setter.

### Third Year

In the final year, the student will reach up to the roles equivalent to Design Engineer, CAM Engineer, Project Managers and Technical Trainers.

## WHY B.VOC IN MANUFACTURING SKILLS

- To attain skills that allows students to work in a high-tech work environment with long-term job security, competitive salaries and benefits.
- Focus on practical training, which prepares the students for real-world challenges.
- State-of-the-art workshop separately for all the specializations based on work situations and well-equipped infrastructure, including laboratories and a stocked library that enhances the learning experience.
- Qualified and experienced faculty members, and trainers along with the visiting faculties from Switzerland who provide guidance and support to students.





# B.VOC COURSES IN MANUFACTURING SKILLS

1

## B.VOC IN MANUFACTURING SKILLS (INDUSTRY INTEGRATED)

The Faculty of Manufacturing Skills runs B.Voc in Manufacturing Skills (Industry Integrated) in collaboration with the RS India, which is the leading Swiss technology based company assuring eligible students of a secured placement after completion of the course.

### ELIGIBILITY CRITERIA

- 60% marks in 12th PCM/PCB/PCA, or
- 60% marks in ITI, or
- 70% marks in Arts/Commerce

### DURATION

3 Years

### SELECTION PROCEDURE

Admission will be through an Entrance Exam followed by a personal interview.

2

## B.VOC IN MANUFACTURING SKILLS

The Faculty of Manufacturing also runs a B.Voc in Manufacturing Skills that connects students to diverse industrial partners for their workplace training.

### ELIGIBILITY CRITERIA

- 12th Pass in any stream, or
- 2 Years of ITI, or
- Polytechnic diploma holders are eligible for lateral entry admission

### DURATION

3 Years

### SELECTION PROCEDURE

Admission will be through an Entrance Exam followed by a personal interview.



# INDUSTRIAL COLLABORATION

The Faculty of Manufacturing Skills Education (FMSE) is having very strong collaboration with the renowned manufacturing industries for corporate training which enhanced the practical skills as well as the organizational behavior of their employees

The companies which are associated with us are:



## MODULAR STRUCTURE, AND ENTRY & EXIT OPTIONS

All B.Voc programs are structured in a modular format, offering various entry and exit points at Certificate, Diploma, Advanced Diploma levels. Each of the six semesters is designed to carry 30 credits, culminating in a total of 180 credits upon completion of the B.Voc program. This

modular approach provides students with the flexibility to progress through the program at their own pace and choose the level of qualification that best suits their academic and career aspirations.

Semester	Duration	Exit in	Location	Credits (Cumulative)	Award
I	6 Months	6 Months	BSDU	30	Certificate
II	6 Months	1 Year	Industry Workplace	60	Diploma
III	6 Months	1.5 Years	BSDU	90	----
IV	6 Months	2 Years	Industry Workplace	120	Advanced Diploma
V	6 Months	2.5 Years	BSDU	150	----
VI	6 Months	3 Years	Industry Workplace	180	B.Voc





## KEY COMPETENCIES

The program at the Faculty of Manufacturing Skills focuses on a complete framework towards all the areas of competencies needed to become a successful professional in the manufacturing industry.

### ■ Production & Quality

Students learn to maintain high standards in manufacturing. They gain skills in machining, ensuring precision, efficiency, and product integrity. This prepares them for industries like automotive, aerospace, manufacturing etc.

### ■ Machine-Tool Knowledge

Students learn a lot about different machines, how they work, and what they need to keep running smoothly. This knowledge helps them use modern machines well, so they work perfectly in factories where things are made automatically.

### ■ CAD-CAM Proficiency

Students develop the expertise to use software for designing machine parts. They gain hands-on experience in creating digital models and converting them into instructions for automated production. This prepares them for various industries like aerospace, automotive, and manufacturing.

### ■ Automation Skills

Students learn industrial robotics, pneumatics & hydraulics enhancing productivity across various industries like manufacturing and robotics.

### ■ Project Management

Students learn to plan, execute, and oversee projects effectively. They gain skills in scope definition, scheduling, budgeting, and team coordination. Through practical exercises, they develop communication and leadership abilities to ensure project success across diverse industries.

### ■ Safety Awareness

Safety is a top priority in the manufacturing industry. Students learn about safety regulations and practices to ensure a safe working environment for themselves and others.

### ■ Problem-Solving Skills

The program emphasizes the development of problem-solving skills, which are crucial for identifying and resolving issues that arise in manufacturing systems.



## INFRASTRUCTURE AND EQUIPMENT

The BSDU Campus has the latest machinery imported from Germany, Austria, Switzerland, Japan, etc. with well-equipped labs.

- Pneumatic & hydraulic lab
- Conventional Milling Department
- Surface & Cylindrical grinding Department
- Conventional Turning Department
- Simulation Lab
- CNC Milling & Turning Department
- Techno Lab
- Hand skill Department
- Assembly Department
- CAD- CAM Lab
- Quality Control Department




## FUTURE PROSPECTS

The future outlook for professionals in the manufacturing industry is optimistic. India boasts of being one of the world's largest manufacturing sectors, which is consistently expanding. The demand for skilled professionals to oversee and maintain production processes remains steady. Graduates can anticipate a plethora of opportunities for career advancement and personal growth within this dynamic sector. Moreover, with the burgeoning demand for electric and hybrid vehicles, there is an increasing need for millions of technocrats to support the rapidly growing EV industry, further fueling demand within the manufacturing sector.

The key skills taught in the program translate into meaningful professions in the manufacturing industry. Graduates are prepared for careers in the Indian as well as the international markets as:

- Production Engineer
- CAD-CAM Engineer
- Quality Inspector
- Automation Engineer
- Maintenance Supervisor
- Tool Room Incharge
- Technical Trainer
- Project Manager
- Technical Writer
- Assembly Line Engineer
- Technocrats





B.Voc in Manufacturing Skills also provides the opportunity to become a job provider rather than merely being a job seeker through entrepreneurship/ start-up opportunities in the manufacturing field.

Being a graduation degree course this allows students to take further studies and pursue B. Tech (Mechanical)/M.Voc (Manufacturing & Maintenance)/MBA.

## ADMISSION PROCESS

- Applications in the prescribed format for undergraduate programs (B.Voc) are invited from eligible candidates.
- After reviewing the applications, selected candidates are invited for the BSDU Common Admission Test 2024.
- Qualified candidates from the entrance test will appear before the interview panel for personal interviews.
- After compiling all the assessment weightage, a merit list of successful candidates is prepared and notified to the candidates.
- All successful candidates are then called for counseling sessions, document verification, and fee payment as per the notified schedule to complete the admission modalities.

## ADMISSION CLOSES ON:

**15th May, 2024**  
(Round-1)

**18th June, 2024**  
(Round-2)

**22nd July, 2024**  
(Round-3)







## FEE STRUCTURE FOR B.VOC (3-YEAR PROGRAM)

Courses	I*/III/V Semester @ BSDU Campus	II/IV/VI Semester @ Industry Workplace Training	Total Yearly Fee for the Program
Manufacturing Skills (Industry Integrated)	Rs. 50,000	Rs. 10,000	Rs. 60,000
Manufacturing Skills	Rs. 50,000	Rs. 10,000	Rs. 60,000

\*For all courses, an additional fee of Rs. 6,000 will be collected in the 1st semester. This includes a Rs. 1,000 registration fee and a Rs. 5,000 caution money deposit. The caution money is refundable upon completion of the B.Voc program.

Fee to be deposited within seven days of receiving provisional admission letter.

# COURSE STRUCTURE

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## SEMESTER 1

- Applied Mathematics
- Engineering Drawing
- Measuring & Metrology
- Conventional Milling
- Conventional Turning
- Hand Skills
- Branch Course-I
- Open Elective

### General Education

- New Phase of Life
  - Dealing with Money
  - Partnership and Relationships
  - Labour Laws and Rights
- 

## SEMESTER 2: Workplace Training I

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## SEMESTER 3

- CNC Milling
- CNC Turning
- Material Science
- Manufacturing Processes
- Pneumatics & Hydraulics
- Computer Aided Design
- Branch Course-II
- Open Elective

### General Education

- Health and Well being
  - Education and Learning
  - Media and Communication
  - Cultural Diversity and Inclusion
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## SEMESTER 4: Workplace Training II

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## SEMESTER 5

- Production Management
- Industrial automation & robotics
- Quality Management
- Multi Axis Machining
- Computer aided manufacturing
- Project Management
- Branch course -III
- Open elective

### General Education

- Environment and Sustainability
  - Problem Solving Through Logical Reasoning
  - Global Challenges
  - Visions of the Future and Responsibility
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## SEMESTER 6: Workplace Training III

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# LIFE @ BSDU



## THE CAMPUS

BSDU, Jaipur is strategically situated at Mahindra World City, a multiproduct Special Economic Zone based on the concept of an 'Integrated Business City', that is home to prestigious firms like JCB, Mahindra, Infosys, ICICI Bank, RS India, TTK Healthcare, and Ball Corporation. It is located at just 45 min drive from both Jaipur International Airport and Railway Station.



## SPORTS

BSDU believes in building an all-round personality including physical fitness for its students. It provides adequate outdoor and indoor sports facilities. These facilities include well-maintained Volleyball and Football grounds and carom, soccer, chess, table tennis, etc.





## HOSTEL

BSDU offers a hostel facility separately for boys and girls. It is a home away from home, equipped with indoor games facilities, common rooms, and a mess. Hot water is provided during winters. Twenty-four-hour water and electricity supply is ensured. Strict security measures are taken to ensure safety of the students. The hostels have a resident warden. The Mess facility has high-quality air-cooled dining room serving four meals every day.

### Hostel Fee

- Rs. 36,600 per semester for Boarding & Lodging.
- Hostel Charges include both Hostel Stay (Non-AC) and Mess/Dining charges.
- Electricity will be charged as per actual consumption.
- This Fee Structure is valid for the Academic Year 2024-25.





## CENTRAL LIBRARY

Central Library holds a hybrid collection of printed as well as electronic resources which include books, journals, databases, audiovisual aids, CDs/DVDs, e-books, e-journals, e-question papers, etc. Currently, it has a collection of 18000 books, 900 CD/DVDs, Wall Chart in 13 Trades, Transparency Sheets in 18 Trades, DELNET Membership, EBSCO Engineering Database. Other Infrastructure includes DELNET, KOHA, DSpace software, and NPTEL Videos.





## DEPARTMENT OF WORKPLACE TRAINING

The Department of Workplace Training & Placement (DWTP) at Bhartiya Skill Development University (BSDU) connects students with recruiters, ensuring a match between their mutual aspirations. BSDU's curriculum is designed to prepare students for successful careers with reputable organizations. The University enhances students' professional skills through various activities and events, helping them excel in their chosen fields.

DWTP organizes year-round activities to prepare students for employment, with regular visits from reputed organizations for compulsory internships across all programs. The department maintains strong relationships with these organizations, ensuring continuous opportunities for students. DWTP also provides training in aptitude tests, group discussions, resume preparation, and interviews, ensuring students are equipped with both technical knowledge and soft skills to meet industry expectations.



## SCHOLARSHIPS & FEE CONCESSION

BSDU is committed to making its world-class education accessible & affordable for students from all walks of life. To promote equitable and inclusive skill education in line with the NEP 2020, the following scholarships and fee concessions are offered to students.

- Tuition fee Concession for:
  - Girls and Transgender
  - Defense Personnel
  - Socio-cultural identities
  - Differently-abled students
  - Economically weaker Identities
- Academic Scholarship

## OUR RECRUITERS



## SUCCESS STORIES

Student Name	Year of Passing	Salary/ Month	Name of Company
Bablesh Kumar Kharol	2021	Rs. 42,000	Monotech System Ltd.
Tarun Bakoliya	2020	Rs. 40,000	NBC Pvt Ltd

## RECOGNITIONS

- The establishment of BSDU, Jaipur is recognized and approved by the State Government. The University has been incorporated by the Government of Rajasthan through legislation of Bhartiya Skill Development University, Jaipur Act 2017(Act No. 3 of 2017) and was notified vide Notification No. F.2(4) Vidhi/2017 dated 30th March 2017 in the Rajasthan Gazette.
- Recognized by the University Grants Commission (UGC)
- All B.Voc and M.Voc courses of Bhartiya Skill Development University are aligned with the National Skill Qualifications Framework (NSQF)
- Bhartiya Skill Development University is a member of the Association of Indian Universities.

## ADMISSION QUERIES

admissions@ruj-bsdu.in | +91 9116611131



### CAMPUS

BHARTIYA SKILL DEVELOPMENT UNIVERSITY  
Plot 005/001-002, DTA Mahindra World City,  
Ajmer Road, Jaipur, Rajasthan

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Incorporated through Rajasthan State Legislature Act No. 3 of 2017.

UGC approved establishment under Section 2(f) of the  
UGC Act 1956 dated 10.11.2020.



[ruj-bsdu.in](http://ruj-bsdu.in)