



SAARTHI - सारथी

करियर मार्गदर्शन पोर्टल · Career Guidance Portal

"सही मार्गदर्शन, उज्ज्वल भविष्य।"

करियर शीट · CAREER SHEET

टूल इंजीनियर

Tool engineers design and develop dies, moulds, jigs and fixtures used by machines and factories. This profession is the backbone of the automobile and manufacturing industry.



Scan for everything on this career

Salary, exams, colleges, the routes in and the steps after — all on the portal.

career.gsssjethantri.in/#/career/eng-4648

राजकीय उच्च माध्यमिक विद्यालय, जेठन्तरी

Govt. Sr. Sec. School, Jethantri · ब्लॉक समदड़ी · बालोतरा (Block Samdari · Balotra)

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सुशील कुमार शर्मा

प्रधानाचार्य, रा.उ.मा.वि. जेठन्तरी · मास्टर ट्रेनर
Principal, GSSS Jethantri · Master Trainer



श्री चेनाराम चौधरी

प्रधानाचार्य, डाइट बाड़मेर
Principal, DIET Barmer



श्रीमती संघमित्रा

वरिष्ठ व्याख्याता, डाइट बाड़मेर (सहयोग)
Sr. Lecturer, DIET Barmer (Support)



भरत चौधरी

अभिकल्पना व विकास · व्याख्याता (इतिहास)
Designed & developed · Lecturer (History)

विशेष धन्यवाद · SPECIAL THANKS



सुरेन्द्र सिंह राठौड़

व्याख्याता (इतिहास) · रा.उ.मा.वि. कानाना



सुरेश कुमार सैन

व्याख्याता (भूगोल) · रा.उ.मा.वि. रामसीन मूंगड़ा



वनिता कुमारी

व्याख्याता (इतिहास) · रा.उ.मा.वि. रामसीन मूंगड़ा



कमलेश चौधरी

व्याख्याता (राजनीति विज्ञान) · रा.उ.मा.वि. टापरा

करियर मार्गदर्शन कार्यशाला, डाइट बाड़मेर (14-17 जुलाई 2026) में विकसित व लोकार्पित
Developed & unveiled at the Career Guidance Workshop, DIET Barmer (14-17 July 2026)

यह एक स्वतंत्र परियोजना है, जो सरकार की आधिकारिक करियर-मार्गदर्शन सामग्री पर आधारित है। · An independent project based on the Government's official career-guidance content.

1 About this career

Tool engineers design and develop dies, moulds, jigs and fixtures used by machines and factories. This profession is the backbone of the automobile and manufacturing industry.

2 At a glance

Minimum qualification	12th PCM + degree or diploma in tool/mechanical engineering
Work mode	Design office + factory shop floor
Demand	Good - rising with Make in India, auto and EV manufacturing
Top earning	Manufacturing engineering manager: Rs 1.5-2.5 lakh/month

3 What you need

INTERESTS

- Interest in machines and tools
- Liking for maths and drawing
- Making and improving things

ABILITIES

- Strong grip on advanced maths
- Attention to detail and time management
- Analytical thinking and problem solving

KEY SKILLS

- Tool and die design
- Understanding of CNC machining
- GD&T (precision measurement)
- CAD/CAM software (AutoCAD, CATIA)
- Knowledge of materials and heat treatment
- Quality control

4 How to get there

- 1 Pass 10+2 with Physics, Chemistry, Maths.
- 2 Do B.Tech in tool/mechanical engineering, or a tool & die diploma after Class 10/12.
- 3 Enter an engineering college via JEE Main or REAP.
- 4 Take practical training at tool rooms like CITD/IGTR.
- 5 Intern with an auto/manufacturing company and get placed.
- 6 With experience, add a master's degree or specialist course.

MAIN EXAMS

- JEE Main / JEE Advanced
- REAP (Rajasthan)
- Rajasthan polytechnic admission (diploma)
- GATE (for M.Tech)

5 Where to study

GOVERNMENT INSTITUTES

- MNIT Jaipur (Mechanical Engineering) — Jaipur, Rajasthan (<https://www.mnit.ac.in>)
- Rajasthan Technical University (RTU) — Kota, Rajasthan
- Government polytechnic colleges (Mechanical/Tool & Die) — Jaipur/Jodhpur, Rajasthan
- Central Institute of Tool Design (CITD) — Hyderabad, Telangana
- Delhi Institute of Tool Engineering (DITE) — Delhi
- Indo-German Tool Room — Ahmedabad/Aurangabad

PRIVATE INSTITUTES

- BITS Pilani (Mechanical) — Pilani, Rajasthan
- NTTF Technical Training Centres — Bengaluru and other cities

ONLINE

- NPTEL/SWAYAM (Manufacturing, CAD/CAM courses) — Online (<https://nptel.ac.in>)

FEES

Diploma about Rs 20,000-1 lakh; B.Tech about Rs 2-4 lakh in government and Rs 4-18 lakh in private institutes (full course); varies by institute.

SCHOLARSHIPS

- National Scholarship Portal (<https://scholarships.gov.in>)
- AICTE Pragati (girls) / Saksham scholarships (<https://www.aicte-india.org>)

6 What the work is like

WHERE YOU WORK

Automobile and EV companies, manufacturing plants, tool rooms, technology companies.

WORK CULTURE

Work in both design office and factory; plant visits common. Opportunities exist for persons with disabilities.

WHO HIRES

- | | |
|--|---|
| • Maruti Suzuki / Tata Motors / Mahindra | • Bharat Forge / Bosch |
| • Godrej Tooling / L&T | • Government tool rooms (CITD, IGTR) |
| • PSUs like HAL / BHEL | • Auto parts companies of Jaipur-Bhiwadi belt |

DEMAND (2026)

With EV, defence and electronics manufacturing growing in 2026, demand for skilled tool designers is good; experienced people are scarce.

7 Career growth

- 1 Tool Engineer
- 2 Manufacturing/Design Engineer
- 3 Senior Manufacturing Engineer
- 4 Manufacturing Engineering Manager

EARNINGS

Starting	₹18,000-30,000
Mid level	₹40,000-80,000
Senior level	₹1,00,000-2,00,000

Monthly pay; varies by company, city and skill. 2026 levels, indicative.

8 The good parts · The challenges

The good parts

- Stable, hands-on career in manufacturing
- Entry possible via diploma too
- Experienced specialists are highly valued

The challenges

- Average starting salary
- Factory shifts and noisy environment possible
- Must keep learning new CNC/CAD technology

9 Real-life journeys

Baba Kalyani

Chairman, Bharat Forge

A mechanical engineer from BITS Pilani, Baba Kalyani built Pune's Bharat Forge into the world's second-largest forging company on the strength of forging and die technology.

Wikipedia · https://en.wikipedia.org/wiki/Baba_Kalyani

P. V. Rajalakshmi

Tool and Die Engineer, Asia's First Woman Tool and Die Engineer

In 1978, P. V. Rajalakshmi joined the Nettur Technical Training Foundation as the only girl studying tool and die engineering in the whole institution. Working her way through tool rooms and machine shops in a male-dominated field, she became Asia's first woman tool and die engineer. Today she runs her own company, Mantra Leistung, training young people in tool design and precision manufacturing.

National Skills Network · <https://nationalskillsnetwork.in/meet-the-first-woman-tool-and-die-engineer-in-asia/>

10 Sources & further reading

1. Rajasthan Career Guidance: Tool Engineering — <https://cg.rajasthan.gov.in/careerguidance/hi/career/%e0%a4%9f%e0%a5%82%e0%a4%b2-%e0%a4%87%e0%a4%82%e0%a4%9c%e0%a5%80%e0%a4%a8%e0%a4%bf%e0%a4%af%e0%a4%b0%e0%a4%bf%e0%a4%82%e0%a4%97-tool-engineering/>
2. AICTE — <https://www.aicte-india.org>
3. NPTEL (free online courses) — <https://nptel.ac.in>
4. National Career Service (NCS) — <https://www.ncs.gov.in>



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Interest and aptitude tests, government jobs, skill courses and a CV builder — free, no login, and it works offline.

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