



SAARTHI - सारथी

करियर मार्गदर्शन पोर्टल · Career Guidance Portal

"सही मार्गदर्शन, उज्ज्वल भविष्य।"

करियर शीट · CAREER SHEET

इलेक्ट्रॉनिक्स और कम्युनिकेशन इंजीनियर

Electronics and communication (ECE) engineers build mobiles, chips, 5G networks and satellite systems. In the semiconductor-mission era this core branch is shining again.



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-4614

राजकीय उच्च माध्यमिक विद्यालय, जेठन्तरी

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

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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

Electronics and communication (ECE) engineers build mobiles, chips, 5G networks and satellite systems. In the semiconductor-mission era this core branch is shining again.

2 At a glance

Minimum qualification	12th PCM + B.Tech/diploma in ECE
Work mode	Lab, office and field; shifts possible
Demand	High - in chip design, 5G and embedded systems
Top earning	Senior chip-design engineer: Rs 2-3 lakh+/month

3 What you need

INTERESTS

- Interest in gadgets and circuits
- Taking things apart to understand them
- Liking for science and maths

ABILITIES

- Logical analysis
- Precision in work
- Problem solving

KEY SKILLS

- Digital and analog circuit design
- VLSI/chip design (Verilog)
- Programming (C, Python)
- Embedded systems and microcontrollers
- Communication and signal processing
- Understanding of networks and IoT

4 How to get there

- 1 Pass 10+2 with Physics, Chemistry, Maths.

- 2 Do B.Tech/B.E. in ECE via JEE Main/Advanced or REAP, or take a polytechnic diploma.
- 3 Do electronics projects, robotics and internships.
- 4 Build special skills in VLSI, embedded or 5G.
- 5 Go for campus placement, GATE (M.Tech/PSU) or ISRO-DRDO exams.

MAIN EXAMS

- JEE Main / JEE Advanced
- BITSAT
- ISRO/DRDO/BEL recruitment exams
- REAP (Rajasthan)
- GATE (EC)

5 Where to study

GOVERNMENT INSTITUTES

- MNIT Jaipur — Jaipur, Rajasthan (<https://www.mnit.ac.in>)
- MBM University — Jodhpur, Rajasthan
- CTAE (MPUAT) — Udaipur, Rajasthan
- Rajasthan Technical University (RTU) — Kota, Rajasthan
- Govt Women Engineering College — Ajmer, Rajasthan
- IIT Jodhpur (Electrical) — Jodhpur, Rajasthan (<https://iitj.ac.in>)

PRIVATE INSTITUTES

- BITS Pilani — Pilani, Rajasthan
- LNMIIT — Jaipur, Rajasthan
- Manipal University Jaipur — Jaipur, Rajasthan

ONLINE

- NPTEL/SWAYAM (Electronics courses) — Online (<https://nptel.ac.in>)

FEES

Full course about Rs 1.5-4 lakh in government institutes; Rs 4-12 lakh in private. Diploma is much cheaper; varies by institute.

SCHOLARSHIPS

- National Scholarship Portal (<https://scholarships.gov.in>)
- Vidya Lakshmi Education Loan Portal (<https://www.vidyalakshmi.co.in>)

- Buddy4Study (<https://www.buddy4study.com>)

6 What the work is like

WHERE YOU WORK

Electronics and semiconductor companies, telecom operators, chip-design centres (Bengaluru, Noida), defence-space institutes.

WORK CULTURE

5-6 days a week, 8-9 hours daily; shifts possible in network roles. Opportunities exist for persons with disabilities.

WHO HIRES

- Qualcomm / Intel / NXP
- ISRO / DRDO / BEL
- IT companies (TCS, HCL etc.)
- Jio / Airtel / Nokia / Ericsson
- Tata Electronics and semiconductor fabs
- IoT/drone startups

DEMAND (2026)

In 2026 the India Semiconductor Mission, 5G/6G rollout and Make in India keep ECE demand high; chip-design salaries have risen fast.

7 Career growth

- 1 Junior technician / graduate engineer
- 2 Electronics engineer
- 3 Communication/design engineer
- 4 Senior technical manager
- 5 Technical director / architect

EARNINGS

Starting	₹20,000-45,000
Mid level	₹50,000-1,20,000
Senior level	₹1,50,000-3,00,000

Monthly pay; higher in chip design and MNCs, lower in services. 2026 levels, indicative.

8 The good parts · The challenges

The good parts

- Doors open to both core and IT fields
- Growing opportunities from the semiconductor boom
- Government paths too (ISRO, BEL)

The challenges

- Fast-changing tech; constant learning
- Core jobs concentrated in a few cities
- Stiff competition at entry level

9 Real-life journeys

Nigar Shaji

Project Director, Aditya-L1 solar mission (ISRO)

Daughter of a farmer from Tamil Nadu's Tenkasi district, Nigar Shaji studied electronics and communication at a government school and government engineering college. Joining ISRO in 1987, she rose to lead India's first solar mission, Aditya-L1.

News9live · <https://www.news9live.com/state/tamil-nadu/meet-aditya-l1-mission-director-nigar-shaji-the-daughter-of-a-farmer-from-tamil-nadu-s-tenkasi-2271944>

Rajeev Suri

Former CEO, Nokia; ECE graduate

An electronics and communication engineering graduate from Manipal Institute of Technology, Rajeev Suri became CEO of telecom giant Nokia without an MBA - a model of core engineering leading to global leadership.

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

10 If this route does not work out

One exam or one attempt does not close the door. The same subjects also open these routes — entry is usually easier, and you can return to this field later.

- Mechanical Engineer
- Civil Engineer
- Electrical and Electronics Engineer

11 Sources & further reading

1. Rajasthan Career Guidance: Electronics and Communication Engineer — <https://cg.rajasthan.gov.in/careerguidance/hi/career/%e0%a4%87%e0%a4%b2%e0%a5%87%e0%a4%95%e0%a5%8d%e0%a4%9f%e0%a5%8d%e0%a4%b0%e0%a5%89%e0%a4%a8%e0%a4%bf%e0%a4%95%e0%a5%8d%e0%a4%b8-%e0%a4%94%e0%a4%b0-%e0%a4%95%e0%a4%ae%e0%a5%8d%e0%a4%a8%e0%a5%8d%e0%a4%af/>
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>



And 770+ more careers — the whole portal

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

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