TELECOM ENGINEER

SALARY

Graduate trainee engineer ★★☆☆☆
Senior telecom engineer ★★★★☆

INDUSTRY PROFILE

Growing sector due to increase of technologies • Employers include manufacturers of communications systems and devices, government departments, and telecom providers

JOB DESCRIPTION

A telecommunications—or telecom—engineer works with a variety of technologies that enable the exchange of data and communications. These include cell and fixed-line telephones, radio, cable or wireless broadband Internet, fiber optics, and satellite-based systems. As a telecom engineer, you design, install, test, or repair these systems for clients that may range from large organizations to individual customers.

AT A GLANCE

YOUR INTERESTS Electronics • Information Technology (IT) • Electrical engineering • Software engineering • Mathematics • Physics

ENTRY QUALIFICATIONS A degree in telecommunications, electrical engineering, computer science, or a related subject is required.

LIFESTYLE Full-time office hours are the norm, but telecom engineers may have to work overtime to meet deadlines. Self-employed contract work is common.

LOCATION Engineers mostly work in an office, but travel is required for site visits, meetings, or conferences. Working remotely from home is also possible.

THE REALITIES Meeting delivery deadlines can be stressful. However, working at the forefront of developing technologies can be rewarding.

CAREER PATHS

Telecommunications engineering is a broad field. Following a degree, most telecom engineers join a graduate training program and specialize in an area, such as broadcast technology or computer networks. You must continue learning throughout your career to keep pace with fast-changing technologies.

TECHNICIAN Studying at a vocational school will enable you to work as a technician, testing and maintaining telecom equipment. You can then study for a degree while employed.

GRADUATE With a degree in a technical subject, you can enter a company's graduate training program. You can increase your chances of entry with previous work experience, such as an industrial placement.

RELATED CAREERS

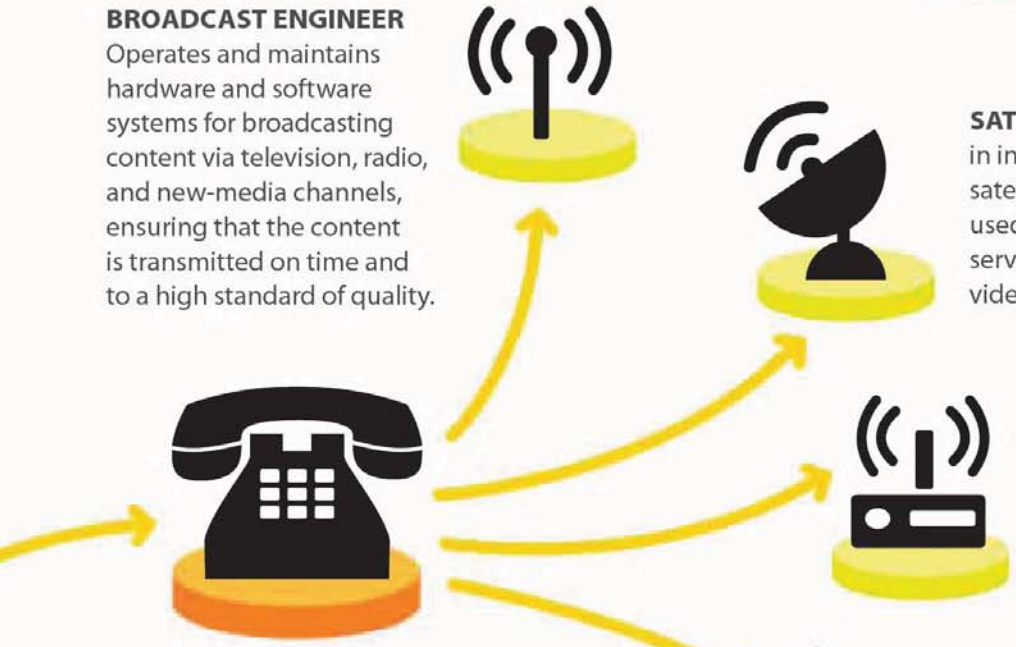
- **SYSTEMS ANALYST** *see pp. 120–121*
- **ELECTRICAL ENGINEER** *see pp. 186–187*
- **TELECOMMUNICATIONS RESEARCHER** Researches new forms of telecommunications technology—such as for telephones, television, or the Internet—for commercial firms or schools.

The global telecom industry was valued at $5 trillion in 2013, a rise of 6 percent from 2012.

SKILLS GUIDE

- Good communication skills to explain complex design solutions to technicians and customers.
- Strong team-working skills to collaborate with other specialists on multidisciplinary projects.
- The ability to find creative, innovative, and cost-effective solutions to design challenges.
- Strong analytical skills for understanding a vast and evolving range of technologies.
- The ability to multitask and prioritize jobs while managing several projects at once.

BROADCAST ENGINEER Operates and maintains hardware and software systems for broadcasting content via television, radio, and new-media channels, ensuring that the content is transmitted on time and to a high standard of quality.



SATELLITE ENGINEER Specializes in installing, configuring, and repairing satellite communications equipment used in areas including television services for home users or videoconferencing to remote sites.

NETWORK ENGINEER Installs and maintains IT networks—such as fiber-optic, wired, and wireless systems—used by businesses and Internet Service Providers (ISPs).

TELECOM ENGINEER As a telecom engineer, you must possess technical expertise to understand and design telecom systems, and management skills to ensure that your projects are run efficiently. You can choose to work freelance or as a company employee.

INTEGRATION/TEST ENGINEER Writes, modifies, and tests the computer code that underpins most telecommunications technologies.