# COMPUTER SCIENCE ENGINEER

A Computer Science Engineer deals with the design, implementation, and management of information systems of both, software & hardware processes. As a computer scientist, you specialize in the theory of computation and the design of computational systems. Computer Science engineering allies with various disciplines such as electrical and electronics engineering, information technology, software engineering, and more.

## PERSONAL COMPETENCIES \*\*

- · You enjoy science
- You like to do experiments
- You like to analyze things (problems/situations)
- · You enjoy figuring out how things work

#### **SCHOLARSHIPS**

- Merit-cum-Means based Scholarship About 20,000 such engineering scholarships are awarded by the Ministry of Minority Affairs every year. The full course fees of awardees is directly paid to their institutions under this scheme. \*
- Indian Oil Educational Scholarship- The IOC Ltd offers 300 scholarships every year to eligible students. Students need to be enrolled in an undergraduate course. The scholarship particularly focuses on students with physical disabilities, women and students from North East and J&K.\*
- "Ishan Uday" Special Scholarship Scheme For promoting higher education and for encouraging children belonging to economically weaker section of the NE region, the UGC has launched "Ishan Uday" Special Scholarship Scheme for North Eastern Region students.
- Visit www.scholarships.gov.in the National Scholarship Portal. Under this portal there are other central government schemes offered by different departments, UGC/AICTE Schemes and State Schemes.\*
- Visit www.buddy4study.com a gateway to scholarships starting from Class XI.\*
- Scholarships are also available in institutes based on merit.\*
- \*(Availability of these scholarships vary from time to time)

#### LOANS

- VidyaLakshmi, www.vidyalakshmi.co.in, is a portal for students seeking education loan. This portal has been developed under the guidance of the Department of Financial Services, (Ministry of Finance), Department of Higher Education (Ministry of Human Resource Development) and Indian Banks Association (IBA). Students can view, apply and track the education loan applications on the website.
- Some States have student credit cards with low interest rates, for instance, West Bengal, Odisha, Bihar, etc.
- · All banks give education loans.





The approx. course fee ranges between **INR 2,00,000 - 6,00,000\*** for the full course.

\*(The above mentioned figures are approximate numbers. This will vary from Institute to Institute)

## ENTRY PATHWAY

1. Complete 10+2 in the Science stream (Physics, Chemistry and Mathematics)

2. Complete Bachelor's degree (B.Tech./B.E.) in Computer Science Engineering

Complete Bachelor's and then pursue Master's degree (M.Tech/M.E.) in the same field.

For admissions, you must qualify entrance examination conducted at national level (JEE Main, JEE Advanced etc.) or state level (WBJEE, AP EAMCET etc.) or institute level (VET, IP etc.)

Please check the duration of the course during enrolment



The approx. salary of a Computer Science Engineer ranges between **INR 23,000** - **81,917\*** per month.

Source:https://www.payscale.com/research/IN/De gree=Bachelor\_of\_Engineering\_(BEng\_%2F\_BE)% 2C\_Computer\_Science\_(CS)/SalaryDegree=Bachelor\_of\_Engineering\_(BEng\_%2F\_BE)%2C\_Computer\_Science\_(CS)/Salary

. . . . . . . . . . .

#### WHERE WILL YOU WORK

Places of Work: As a Computer Engineer, you will work in a variety of environments: Universities; Research; Varied industries; Government and private business organizations, IT and IT product companies. You may be finding solutions to problems, formulating and testing devices, or working in teams to develop new products.

Work Environment: You will typically have a desk-job in an office setting, although remote work may be an option. You will constantly use technology, including mobile phones, laptops and tablets. If you specialize in hardware, you will handle circuit boards, keyboards and monitors. Computer engineers can work both physically or remotely with other engineers, technology experts and clients.

Opportunities for differently abled exist in this field

#### **EXPECTED GROWTH PATH**



Computer Science Engineer → Systems Engineer → Consultant → Project Manager → Infrastructure Project Manager

Computer Science Engineer → Senior Software Engineer → Project Manager → Information Technology Project Manager → Information Technology Infrastructure Manager

#### Search keywords...



assistant professor of computer science, core computer science, computer engineers

#### WHERE WILL YOU STUDY?

The course is offered by the Department of Computer Science and Engineering. This list of institutes is indicative only.

#### **GOVERNMENT INSTITUTES**

- 1. Assam Science and Technology University, Guwahati
- 2. Assam University Silchar
- 3.CIT Kokrajhar
- 4. Dibrugarh University, Dibrugarh
- 5.IIT Guwahati
- 6. Gauhati University, Guwahati
- 7.NIT Silchar
- 8. Tezpur University, Tezpur
- NERIST Itanagar

#### PRIVATE INSTITUTES

(Please check if institute is affiliated and accredited with UGC and AICTE before applying)

- 1. Assam Down Town University, Guwahati
- 2. VIT Vellore
- 3. Don Bosco College of Engineering and Technology, Guwahati
- 4. Royal Global University, Guwahati
- 5. RIST Guwahati
- PSG Tech Coimbatore
- 7. Ramaiah Institute of Technology, Bangalore
- 8. BMS College of Engineering, Bangalore

#### **ONLINE COURSES**

- Udemy https://www.udemy.com > topic > computer-engineering
- NPTEL\*Swayam: https://archive.nptel.ac.in/noc /courses/106/3

\*NPTEL - National Programme in Technology Enhanced Learning. It is by the Government of India and offers a variety of courses in an audio - video form.

## **EXAMPLE FROM THE FIELD**



Kavita Bala is the Dean of Cornell Ann S. Bowers College of Computing and Information Science (Cornell Bowers CIS). She received her S.M. and Ph.D. from Massachusetts Institute of Technology (MIT), and her B.Tech. from Indian Institute of Technology (IIT, Bombay). Bala specializes in computer vision and computer graphics, leading research projects in recognition and visual search; material modeling and acquisition; realistic, physically-based rendering; and material perception. Bala's research has been adopted by industry in Autodesk's core rendering engine, and she co-founded GrokStyle, a visual recognition Al company, which began as a vision search and shopping tool integrated with IKEA's Augmented Reality application, and was subsequently acquired by Facebook in 2019.\*

Source: https://www.engineering.cornell.edu/ faculty-directory/kavita-bala

\*The above information is for training purposes only and will not be used for any commercial gains.