

CHEMICAL ENGINEER

Chemical Engineers apply the principles of Chemistry, Biology, Physics, and Math to solve problems that involves changing raw materials into useful products. A Chemical Engineer is responsible for the design, manufacture, and operation of plants and machinery in various industries.

PERSONAL COMPETENCIES

- You enjoy Science and Maths
- You like to do experiments
- You like to analyse problems/situations
- You like working with numbers



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 50,000 - 10,00,000***

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

ENTRY PATHWAY

1. Complete your class 10 + 2 in the Science stream (Physics, Chemistry and Mathematics)
 2. Complete Bachelor's degree (B.Tech/BE) in Chemical Engineering
- OR
- Complete Bachelor's degree and follow it up with Master's (M.Tech) in Chemical Engineering.
- 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.) Entrance Exam/CCSHAU Entrance Exam/Assam Agriculture University VET/Rajasthan JET/AGRICET

*Please check the duration of the course during enrolment.



EXPECTED INCOME

*The figures are indicative & subject to change

The approx. salary of a Chemical Engineer ranges from **INR 16,000-84,000*** per month

Source: https://www.payscale.com/research/IN/Job=Chemical_Engineer/Salary

WHERE WILL YOU WORK

Places of Work: Chemical Engineer works in several Industrial plants, Refineries, Petrochemical companies across India

Work Environment: Companies usually work for 6 days a week and 8/9 hours everyday. This may vary from company to company. They might work in shifts.

Opportunities for differently abled exist in this field

EXPECTED GROWTH PATH



Assistant Engineer → Chemical Engineer
→ Senior Chemical Engineer → Process Engineer → Production Manager

WHERE WILL YOU STUDY?

This course is offered by the Department of Chemical Engineering

This list of institutes is indicative only.

GOVERNMENT INSTITUTES

1. IIT Madras
2. IIT Guwahati
3. IIT Delhi
4. IIT Kharagpur
5. Jadavpur University
6. Annamalai University, Tamil Nadu
7. NIT Agartala
8. Malaviya National Institute of Technology, Jaipur
9. Institute of Engineering and Technology, Lucknow
10. Institute of Chemical Technology, Mumbai

PRIVATE INSTITUTES

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

1. Chandigarh University, Chandigarh
2. Birla Institute of Technology and Science, Pilani
3. Vellore Institute of Technology, Vellore
4. Nirma University, Ahmedabad
5. Thapar University, Punjab
6. Birla Institute of Technology, Mesra
7. Manipal University, Jaipur
8. Sathyabama University, Chennai
7. Arya College of Engineering and IT, Jaipur
8. Aravali College of Engineering and Management, Faridabad

Information on the institute rankings can be found at -

<https://www.nirfindia.org/2022/Ranking.html>

DISTANCE LEARNING INSTITUTE

Indira Gandhi National Open University (IGNOU)

ONLINE COURSES

- NPTEL* Swayam

<https://nptel.ac.in/courses/103101004>

- Udemy -

<https://www.udemy.com/topic/chemical-engineering/>

- Coursera -

<https://in.coursera.org/courses?query=chemical%20engineering>

**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

Krishna Deo Prasad Nigam is an Indian Chemical Engineer and also the first Chemical Engineer from India to get the prestigious Humboldt Research Award. After completing his Bachelor of Science in Chemical Engineering from Kanpur, Prof. Nigam became very actively involved in the research activities for energy conservation and development of cleaner and greener technology for environmental safety. He is now associated with the New York Academy of Sciences.*

Source: web.iitd.ac.in/~kdpnigam/humbolt.pdf

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

Search keywords...



*chemical engineer,
process engineer,
chemical process engineer*