

The Role of Chemical Science and Engineering in Advancing Industry

Steven Si*

Department of Electronics and Communication Engineering, Rajasthan Technical University, Rajasthan, India

Commentary

Received: 20-Feb-2023,

Manuscript No. JET-23-94136;

Editor assigned: 23-Feb-2023, Pre QC No. JET-23-94136 (PQ);

Reviewed: 09-Mar-2023, QC No.

JET-23-94136; **Revised:** 16-Mar-

2023, Manuscript No. JET-23-

94136 (R); **Published:** 27-Mar-

2023, DOI: 10.4172/2319-

9857.12.1.0010.

***For Correspondence:** Steven Si, Department of Electronics and Communication Engineering, Rajasthan Technical University, Rajasthan, India

E-mail: sixf@edu.cn

Citation: Si S, The Role of Chemical Science and Engineering in Advancing Industry. 2023;12:0010.

Copyright: © 2023 Si S. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

ABOUT THE STUDY

A chemical engineer is a specialist with knowledge in chemical engineering who works mostly in the chemical industry to transform raw materials into various products and manages the design and operation of facilities and machinery. Generally speaking, a chemical engineer is someone who applies and makes use of chemical engineering principles in any of its many real-world applications, which frequently include.

1. Plant and machinery design, production, and use in industrial chemical and associated processes ("chemical process engineers")
2. The creation of new or modified compounds for a variety of items, including foods, drinks, cosmetics, cleansers, and pharmaceutical ingredients ("chemical product engineers")
3. Research and development of cutting-edge technologies like fuel cells, hydrogen energy, and nanotechnology, as well as employment in industries that are entirely or partially descended from chemical engineering, such as materials science, polymer engineering, and biomedical engineering. Working on geophysical projects like rivers, stones, and signs can be included in this.

Chemical technologists and technicians are professionals who offer technical assistance or services in industries related to chemicals. Depending on their particular role and responsibilities, they may work autonomously or directly under supervision. They work in a variety of areas, such as industrial settings and laboratories, among others. As a result, it is quite difficult to generalise about what chem technicians do because every one of their occupations is really different. Such tasks are frequently carried out by biochemical technicians.

Technologists

Compared to technicians, chemical technologists are more likely to take part in the design of the tests themselves and to analyse the results. They might also be in charge of running large-scale chemical processes, and they might even help chemical engineers design those processes. The majority of the time, post-secondary education is necessary to become a chemical technician or technologist. A corporation might occasionally agree to offer a high school grad instruction to become a chemical technician, but more frequently, a two-year degree will be necessary.

Technicians

In clinical (medical) laboratories, chemical or biochemical technologists frequently perform routine examinations on patient samples like blood and urine. Chemical, petrochemical, and pharmaceutical industries all use Chem technologists. Businesses in these sectors may be engaged in manufacturing, consulting, quality control, Research and Development (R&D), and a wide range of other activities. Also, Chem techs employed by these businesses might help with industrial chemistry, environmental protection, chemical engineering, quality control, and other routine analyses as well as chemical and biochemical research involving analyses.

Duties

On general, compared to chemical technicians, chemical technologists are more likely to be given greater autonomy and more challenging tasks.

Chemical technicians: R&D is where chemical technicians are most frequently employed. They frequently perform their duties in a laboratory setting under the direction of a chemist or a chemical engineer. They frequently help set up and carry out chemical tests, and they occasionally operate lab equipment under close supervision. They must uphold the stated criteria for quality control. They may also gather data for analytical research, and occasionally they write study report. Some nations demand national accreditation for chemical technologists and technicians.