

Industry Visit to Biocon Sdn. Bhd.



23RD DECEMBER 2025 | BIOCON, JOHOR, MALAYSIA | TECHNOLOGY AND INFORMATION SYSTEM (SECP1513)

On 23rd December 2025, us, the students from Universiti Teknologi Malaysia under Faculty of Computing has gone to an industrial visit to Biocon as part of the Technology and Information System course. The visit provided valuable exposure to the operations of a leading biotechnology company and highlighted the integration of computing systems in modern pharmaceutical manufacturing. The purpose of this visit was to show the connection between the course and real-world applications, offering students firsthand insights into biotechnology processes, industrial standards, and the role of information systems in healthcare.

What is Biocon?

Biocon is a globally recognized biotechnology company originated from India, specializing in insulin manufacturing and pharmaceutical products. The company plays a crucial role in addressing diabetes and other healthcare challenges worldwide. Its operations combine advanced biotechnology with computer-assisted systems to ensure efficiency, safety, and compliance. The main purpose for this visit is to gain insights into collaboration between biotechnology, computing, and engineering. Technologies are not limited to entertainments, it was originally created to help us live a more efficient and easy life style.

What's the purpose of this visit?

The visit to Biocon was meant to give us a real look at how biotechnology works beyond the classroom. We wanted to see up close how insulin is actually produced and how strict safety and cleanliness are maintained in the labs. Another big part of the visit was learning how computers and automated systems help manage the machines, monitor production, and keep everything running smoothly. It was also eye-opening to see how research in the lab eventually becomes medicine that reaches patients, and how computing, networking, and biology all come together to make that possible. Other than that, the visit gave us an overview of new goals to achieve in the industry.

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HOW ARE BIOTECHNOLOGY OPERATIONS CONDUCTED AT BIOCON?

During our visit to Biocon, we got the opportunity to see for ourselves how biotechnology operations work in the industry. Among the biotechnology operations that we had the opportunity to visit were drug substance, drug product and research and development (R&D). At Biocon, each stage is carried out according to strict Standard Operating Procedures (SOP) such as Good Manufacturing Practice (GMP) to maintain the quality of the insulin produced.

In addition, the use of technological laboratory equipment helps in the production of products and work efficiency such as machines purchased from MIKRON and IMA companies. The documentation process is also very important to identify errors in the product or to store all information about the materials used.

How do computer systems support biotechnology operations at Biocon?

Computing is very important in all operations at biocon. Computer systems are particularly used to collect data, as well as being involved in the product production process.

In addition, when talking about cyber security, it is also very important because it is necessary to protect confidential data such as research results and patient data. It is a priority to prevent information leakage and operational disruption.

How does the Lab-to-Market process at Biocon?

Lab-to-Market is a process that starts from laboratory research results to a marketable product. Among the important processes are research, clinical trials and product production.

In this Lab-to-Market process, computer systems are very important because they involve data analysis, reporting and record keeping. This use can help increase the reliability of the products produced.

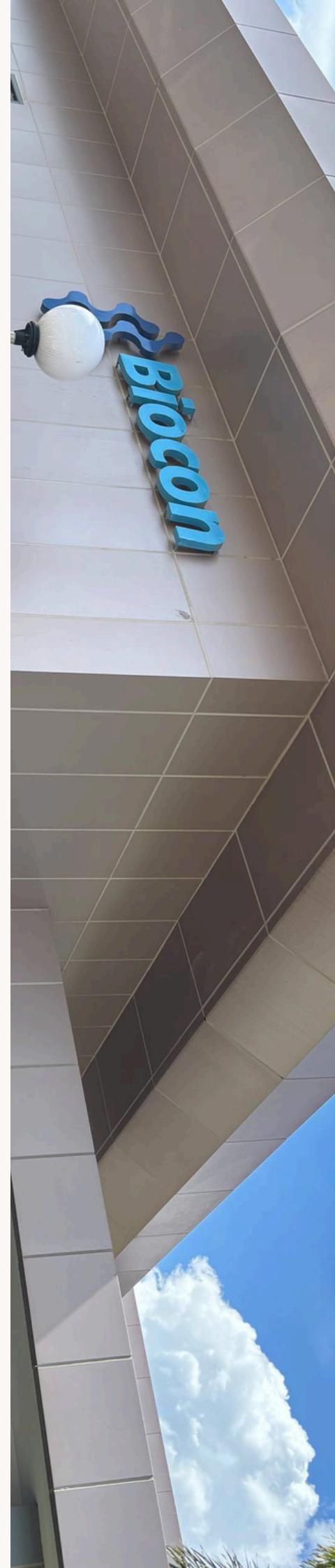
How does the combination of computing and biotechnology help improve work processes?

The integration of computing and biotechnology is a major issue in today's industry. The use of advanced technologies such as artificial intelligence (AI) helps employees make more accurate decisions based on available data.

Furthermore, this integration can help in the development of new products. This proves that computing and biotechnology complement each other in any modern company.

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KEY OUTCOMES

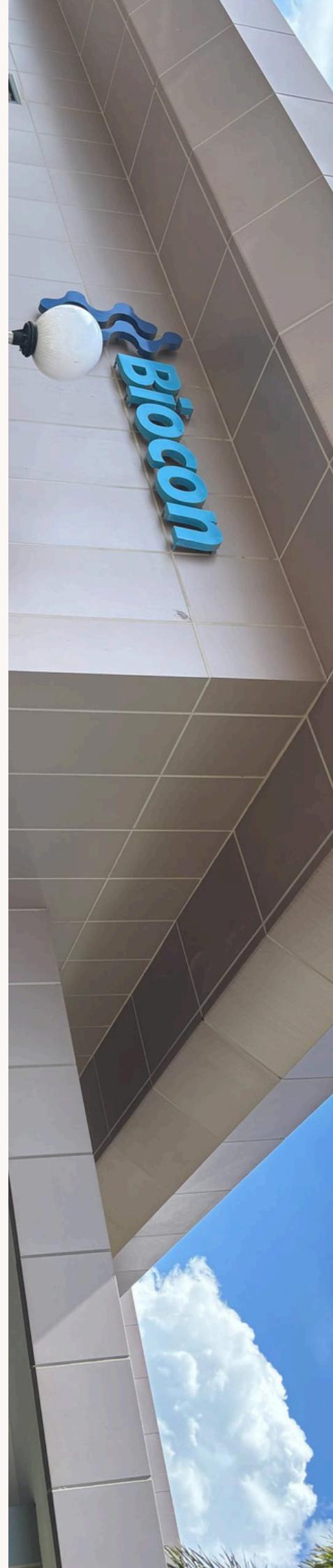
As Computer Network and Security students, the industry visit to Biocon enhanced our understanding of how networking and cybersecurity concepts are applied in real-world industrial environments. We get to apply what we have learned in lecture to the real industry. For instance, network security is used to protect sensitive research and access control from unauthorised access.

Conclusion

In conclusion, the industry visit was an informative and enriching experience for us. Through direct observation and interaction with industry professionals, we gain a deeper understanding of operational processes. This visit significantly contributed to our academic development and better prepared us for future professional challenges.

Acknowledgement

We would like to sincerely thank Biocon Sdn. Bhd. for granting us the opportunity to visit their company and providing us with the valuable exposure to their industrial operations. Besides, we are grateful to our lecturer, Dr Azurah for planning and coordinationg the visit. This visit was an enriching learning experience that contributed significantly to our development in future.



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