



# CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY

An Autonomous Institute | Affiliated to Osmania University  
Kokapet Village, Gandipet Mandal, Hyderabad, Telangana-500075, www.cb.it.ac.in



COMMITTED TO  
RESEARCH,  
INNOVATION AND  
EDUCATION

**45**  
years

## Chaitanya Bharathi Institute of Technology

### Department of Biotechnology

### NPTEL/SWAYAM Courses for

### Honours Degree in Biotechnology

### Courses to Be Pursued For Obtaining Minor Engineering In

### Biochemical Engineering

(Applicable for 2020 admitted students onwards)

S.N.	Title of course	Link	No of weeks	Credits
1	Biochemistry	<a href="https://onlinecourses.nptel.ac.in/noc24_cy06/preview">https://onlinecourses.nptel.ac.in/noc24_cy06/preview</a>	12	3
2	Biochemistry IITM	<a href="https://onlinecourses.nptel.ac.in/noc24_bt12/preview">https://onlinecourses.nptel.ac.in/noc24_bt12/preview</a>	12	3
3	Experimental Biochemistry	<a href="https://onlinecourses.nptel.ac.in/noc24_cy13/preview">https://onlinecourses.nptel.ac.in/noc24_cy13/preview</a>	12	3
4	Applied Environmental Microbiology	<a href="https://onlinecourses.nptel.ac.in/noc24_ce04/preview">https://onlinecourses.nptel.ac.in/noc24_ce04/preview</a>	12	3
5	Chemical Engineering Thermodynamics	<a href="https://onlinecourses.nptel.ac.in/noc23_ch24/preview">https://onlinecourses.nptel.ac.in/noc23_ch24/preview</a> <a href="https://onlinecourses.nptel.ac.in/noc23_ch12/preview">https://onlinecourses.nptel.ac.in/noc23_ch12/preview</a>	12	3
6	Heat transfer	<a href="https://onlinecourses.nptel.ac.in/noc23_ch06/preview">https://onlinecourses.nptel.ac.in/noc23_ch06/preview</a>	12	3
7	Fundamental of Fluid Mechanics for Chemical and Biomedical Engineers	<a href="https://onlinecourses.nptel.ac.in/noc23_ge23/preview">https://onlinecourses.nptel.ac.in/noc23_ge23/preview</a>	12	3
8	Chemical Engineering Fluid Dynamics and Heat	<a href="https://onlinecourses.nptel.ac.in/noc23_ch32/preview">https://onlinecourses.nptel.ac.in/noc23_ch32/preview</a>	12	3

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	Transfer			
9	Aspects Of Biochemical Engineering	<a href="https://onlinecourses.nptel.ac.in/noc23_bt08/preview">https://onlinecourses.nptel.ac.in/noc23_bt08/preview</a>	12	3
10	Unit operations of particulate matter	<a href="https://onlinecourses.nptel.ac.in/noc23_ch27/preview">https://onlinecourses.nptel.ac.in/noc23_ch27/preview</a>	12	3
11	Introduction To Process Modeling In The Membrane Separation Process	<a href="https://onlinecourses.nptel.ac.in/noc23_ch18/preview">https://onlinecourses.nptel.ac.in/noc23_ch18/preview</a>	4	1
12	Waste to Energy Conversion	<a href="https://onlinecourses.nptel.ac.in/noc23_ch05/preview">https://onlinecourses.nptel.ac.in/noc23_ch05/preview</a>	8	2
13	Electrochemical Technology in Pollution Control	<a href="https://onlinecourses.nptel.ac.in/noc23_ch13/preview">https://onlinecourses.nptel.ac.in/noc23_ch13/preview</a>	8	2
14	Two phase flow and heat transfer	<a href="https://onlinecourses.nptel.ac.in/noc23_me24/preview">https://onlinecourses.nptel.ac.in/noc23_me24/preview</a>	4	1
15	Inverse Methods in Heat Transfer	<a href="https://onlinecourses.nptel.ac.in/noc23_me32/preview">https://onlinecourses.nptel.ac.in/noc23_me32/preview</a>	12	3
16	Convective Heat Transfer	<a href="https://onlinecourses.nptel.ac.in/noc23_me23/preview">https://onlinecourses.nptel.ac.in/noc23_me23/preview</a>	4	1
17	Biostatistics and Mathematical biology	<a href="https://swayam.gov.in/nd1_noc20_ce34/preview">https://swayam.gov.in/nd1_noc20_ce34/preview</a>	12	3
18	Fundamentals of food process Engineering	<a href="https://swayam.gov.in/nd1_noc20_ag01/preview">https://swayam.gov.in/nd1_noc20_ag01/preview</a>	12	3
19	Principles Of Downstream Techniques In Bioprocess	<a href="https://swayam.gov.in/nd1_noc20_bt25/preview">https://swayam.gov.in/nd1_noc20_bt25/preview</a>	12	3
20	Industrial Biotechnology	<a href="https://swayam.gov.in/nd1_noc20_bt21/preview">https://swayam.gov.in/nd1_noc20_bt21/preview</a>	12	3
21	Heat exchangers:	<a href="https://swayam.gov.in/nd1_noc20_me52/previe">https://swayam.gov.in/nd1_noc20_me52/previe</a>	12	3

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	Fundamentals and design analysis	<a href="#">w</a>		
22	Mechanical Unit Operations	<a href="https://swayam.gov.in/nd1_noc20_ch27/preview">https://swayam.gov.in/nd1_noc20_ch27/preview</a>	12	3
23	Chemical Reaction Engineering-I	<a href="https://swayam.gov.in/nd1_noc20_ch25/preview">https://swayam.gov.in/nd1_noc20_ch25/preview</a>	12	3
24	Fluid mechanics	<a href="https://swayam.gov.in/nd1_noc20_ce59/preview">https://swayam.gov.in/nd1_noc20_ce59/preview</a>	8	2
25	Technologies For Clean And Renewable Energy Production	<a href="https://swayam.gov.in/nd1_noc20_ch37/preview">https://swayam.gov.in/nd1_noc20_ch37/preview</a>	8	2
26	Numerical methods and Simulation Techniques for Scientists and Engineers	<a href="https://nptel.ac.in/courses/115/103/115103114/">https://nptel.ac.in/courses/115/103/115103114/</a>	8	2
27	Chemical Process Control	<a href="https://swayam.gov.in/nd1_noc20_ch28/preview">https://swayam.gov.in/nd1_noc20_ch28/preview</a>	8	2
28	Chemical Process Safety	<a href="https://swayam.gov.in/nd1_noc20_ch38/preview">https://swayam.gov.in/nd1_noc20_ch38/preview</a>	12	3

**Note:**

1. Students can secure minimum 3 credits in each semester (It is not mandatory but just for the convenience of students so that they can secure 20 credits before seventh semester)
2. Students cannot choose the courses they have studied as part of the regular curriculum (160 credits).
3. In case, any open elective matches with the subjects given in the above list, student can choose such subject only when he/she has not opted that elective in regular curriculum
4. In case, NPTEL is not offering any course listed above, BoS chairman can suggest an alternative course being offered by NPTEL during that time.
5. The list of courses will be updated time to time based on the courses announced by NPTEL and same will be informed to the students before deadline by the concerned faculty coordinators.
6. Students of B.Tech Chemical Engineering are not eligible to pursue this minor engineering course.

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