

## STEPS FOR REGISTRATION



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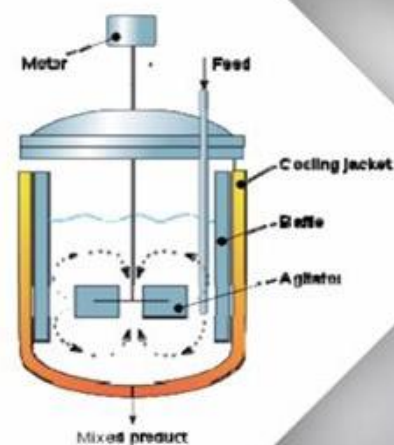
In

Collaboration With CEMCA Introduces  
An Online Certificate Course On



## FERMENTATION TECHNOLOGY

6 JANUARY - 3 FEBRUARY, 2020



### Important dates -

Registrations opens - November 25, 2019

Last date - 31 December, 2020

Start Date: January 6, 2020

Course Co-Ordinator

**Dr. Seema Anil Belorkar**

Department of Microbiology and Bioinformatics

Atal Bihari Vajpayee University

Bilaspur

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## ABOUT THE COURSE -

**Title:-Fermentation Technology**

**DURATION: 4 HRS**

### Introduction:-

Fermentation is used for a variety of commercial purposes.

Using the process of fermentation to produce consumer goods is very popular.

A lot of foods such as yogurt, pickled vegetables such as pickled cucumber and carrots, alcoholic beverages like beer all rely on fermentation for their creation.

Certain antibiotics and drugs also rely on fermentation for their making. For example, an important drug cortisone can be prepared by the fermentation of a plant steroid called Diosgenin.

### OBJECTIVES -

This certificate course provides the knowledge of basic principle of fermentation process, which help students to understand the design, development and operation of industrial level fermentation process.

This fundamental knowledge is essential for the students to make their career in industries based on bioprocesses.

### SCOPE AND OPPURTUNITIES-

- Excellent scope for students pursuing their career in fermentation based industries
- Research field
- For updation of mid term scientists from basic biology field
- Added knowledge pack for PG students.

### ELIGIBILITY CRITERIA-

- XII from Biology Background
- UG
- PG students of Biological sciences

## Course Layout

### Week-1

- L-1 : Introduction to fermentation process
- L-2 : Media for fermentation
- L-3 : Bioreactors

### Week-2

- L-4 : Sterilization process
- L-5 : Inoculum build up
- L-6 : Preservation of microorganisms

### Week-3

- L-7 : Primary Screening
- L-8 : Secondary Screening

L-9 : Production of metabolites by microbes

### Week-4

- L-10 : Improvement of industrial microorganism
- L-11 : Down stream processing
- L-12 : Economics of fermentation

## About Certification

- The course is absolutely free. The students can enroll and learn. The learners can opt for appearing in exam if they want certificate of the course.

- The learners will have to register for the exam. The exam will be online mode.

- The exam is optional. No charges will be required for appearing in the exam

- Date and Time of Exams February 9, 2020. Morning session 9am to 12 noon. Registration url: Announcements will be made when the registration form is open for registrations..

- More details will be made available when the exam registration form is published. If there are any changes, it will be mentioned then.

### CRITERIA TO GET A CERTIFICATE

- There will be online assignments based on the course material taught in that week. The assignment will contain objective type questions.

- Average assignment score = 25% of average of best 3 assignments out of the total 4 assignments given in the course.

- Exam score = 75% of the online certification exam score out of 100

- Final score = Average assignment score + Exam score

- ELIGIBILITY FOR A CERTIFICATE if the student secures score  $\geq 10/25$  in assignment and in exam  $\geq 30/75$ .

- If one of the 2 criteria is not met, you will not get the certificate even if the Final score  $\geq 40/100$ .

- Certificate will have your name, photograph and the score in the final exam with the breakup. It will have the logos of the university and CEMCA. Only the e-certificate will be made available. Hard copies will not be provided.

## Summary of the course

Course status	-	Upcoming
Course type	-	Add-on
Duration	-	4 weeks
Start date	-	6/01/2020 to 03/02/2020
Exam date	-	09/02/2020
Category	-	Biological Sciences
Level	-	Post Graduation

## Books and References-

Industrial Microbiology by A.H. Patel, Macmillan India limited (2004) Industrial Microbiology by LE Casida, J. Wiley, (1968). Principles of Fermentation technology by PF Stanbury, Allan Whitaker and Stephen J Hall, Elsevier Science limited (1995)



Instructor Bio-

### Dr. Seema Anil Belorkar

At The Department Of Microbiology And Bioinformatics, ABVV, Bilaspur  
Has Teaching Experience Of 20 Yrs In Field Of Microbiology.  
Has Published 20 Research Papers In Reputed Journals.  
Has To Her Credit 4 Research Projects From Government Funding Agencies.  
Major Thrust Area Fermentation Biology And Enzymology .  
Has Delivered Online Video Course On Fermentation Technology.

Project Co-ordinator

### Mr. Jeetendra Kumar

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Technical Support  
**Mr. Gulab Singh**  
**Mr. Govind Kaiwartya**  
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