

**KLEF**  
**DEPARTMENT OF BIOTECHNOLOGY**  
**MINUTES OF BOS (2014-15)**



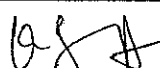


**Particulars of Meeting conducted:**

Type of Meeting	BOS
Department conducting the Meeting	Biotechnology
Number of the Meeting	13
Date of Meeting	18/06/2014
Time of Meeting	1:30 PM
Venue of Meeting	Faculty Conference Hall, Biotechnology

**Agenda items to be discussed:**

Agenda Item number	Agenda Item Description	Resolution
BT-BOS-14001	To change LTP structure from 3-0-2 to 3-1-0 for process engineering principles (Y13 B-Tech).	The BOS unanimously resolved to recommend the LTP structure from 3-0-2 to 3-1-0 for process engineering principles (Y13 B-Tech). (Annexure-1)

**Members Present:**

S.No	Name of the person	Institution	Department	Designation	Position of the person in the meeting	Signature
1	Dr K Srinivasulu	KLEF	Biotechnology	Associate Professor	Chairman	
2	Dr P Sudhakar	A N University, Guntur	Biotechnology	Associate Professor	External Member	
3	Dr BJK Singh	KLEF	Biotechnology	Associate Professor	Internal Member	
4	V Praveen Kumar	KLEF	Biotechnology	Assistant Professor	Internal Member	
5	Dr R Srinivasa Reddy	KLEF	Biotechnology	Associate Professor	Internal Member	

**Based on the feedback received by DAC, the following recommendations were approved in the BOS.**

1. LTP structure from 3-0-2 to 3-1-0 for process engineering principles was approved in the BOS (Y13 B-Tech).

  
**HOD-BT**

**Dr K Srinivasulu**  
**HEAD**

Department of Biotechnology  
K L University, Green Fields,  
Vaddeswaram, Guntur Dt..-522 502.  
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**K L E F**  
**DEPARTMENT OF BIOTECHNOLOGY**  
**MINUTES OF DEPARTMENT ACADEMIC COMMITTEE MEETING (2014-2015)**

The Department Academic Committee meeting was conducted in HOD, Biotechnology, and Seminar Hall on 26/Apr/2014 at 2:00 pm

**Agenda:**

1. To discuss the feedbacks received from stake holders on curriculum
2. To propose the curriculum for B-Tech and M-Tech Y14 batch
3. Any other points with the permission of the DAC chairman

The following members were present:

- |                        |                        |
|------------------------|------------------------|
| 1. Dr.K Srinivasulu    | Head of the Department |
| 2. Dr.BJK Singh        | Professor              |
| 3. Dr. V Praveen Kumar | Associate Professor    |
| 4. Dr.B Mahendran      | Associate Professor    |
| 5. Dr. M Sudhamani     | Associate Professor    |
| 6. Dr. V Badramurthi   | Assistant Professor    |

The following points were discussed and resolved:

1. Upon discussing the feedback from students and faculty, the committee resolved to recommend the following to BOS
  - a. Change of LTP from 3-0-2 to 3-1-0 for process engineering principles for Y13 B-Tech.(Annexure 1)
2. Upon considering above mentioned feedbacks and surveying through the policy documents in relevance to, Human Resource Development Policy, Govt. of India, National Skill Development Corporation, Govt. of India, ABET, NBA norms, AICTE statutory norms , it is resolved to propose enclosed Program development documents and curriculum for B-Tech - Biotechnology Program for BOS approval.

  
**Dr.K Srinivasulu**  
**(Head of the Department)**

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**PROCESS ENGINEERING PRINCIPLES**

L - T - P: 3-0-2

Credits: 4

**Introduction to Engineering Calculations:** Physical variables; dimensions and Units; Measurement conventions: Density, specific gravity; specific volume, mole, chemical composition, vapor pressures, concentration, Stoichiometry .composition of mixtures and solutions: molarity, molality, normality, weight fractions, mole fractions ,volumetric composition laws of chemical combination **Ideal gases** Ideal gas law ,differences between ideal and real gases, application of ideal gas law; Daltons law of additive pressures, amagats law of additive volumes, volume changes with change in composition, pure component volume method, partial pressure method, gases in chemical reactions. **Material balances** Introduction to system and process; difference between steady state and equilibrium, Law of conservation of mass: Types of material balances, Procedure for material balance calculations with and without chemical reactions, yield, conversion, limiting and excess reactants. **Energy balances** Basic Energy concepts: law of conservation of energy, standard heat of formation, standard heat of reaction. latent heat of vaporization and condensation, specific heat, sensible heat of formation ,heat of reaction, heat of combustion Hess's law, effect of temperature and pressure on heat of reaction, kirchooff's law; **Material and energy balances in cell culture.** Material balance for continuous filtration, batch mixing, material balances with recycle, by pass and purge streams. Energy balance worked examples without reaction: cooling in downstream processing, continuous water heater, and fermentation energy balance.

**Text Books**

- 3) Bioprocess Engineering Principles, Pauline M.Doran, ELSEVIER publications.
- 4) Introduction to Biochemical Engineering, D G Rao, Mc Graw Hill publications.

**Reference books**

- 2) Bioprocess Engineering, basic concepts, Michael L.Shuler Fikret Kar



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**PROCESS ENGINEERING PRINCIPLES****L - T - P: 3-1-0****Credits: 4**


**Introduction to Engineering Calculations:** Physical variables; dimensions and Units; Measurement conventions: Density, specific gravity; specific volume, mole, chemical composition, vapor pressures, concentration, Stoichiometry .composition of mixtures and solutions: molarity, molality, normality, weight fractions, mole fractions ,volumetric composition laws of chemical combination **Ideal gases** Ideal gas law ,differences between ideal and real gases, application of ideal gas law, Daltons law of additive pressures, amagats law of additive volumes, volume changes with change in composition, pure component volume method, partial pressure method, gases in chemical reactions. **Material balances** Introduction to system and process; difference between steady state and equilibrium, Law of conservation of mass: Types of material balances, Procedure for material balance calculations with and without chemical reactions, yield, conversion, limiting and excess reactants. **Energy balances** Basic Energy concepts: law of conservation of energy, standard heat of formation, standard heat of reaction. latent heat of vaporization and condensation, specific heat, sensible heat of formation ,heat of reaction, heat of combustion Hess's law, effect of temperature and pressure on heat of reaction, kirchoff's law; **Material and energy balances in cell culture.** Material balance for continuous filtration, batch mixing, material balances with recycle, by pass and purge streams. Energy balance worked examples without reaction: cooling in downstream processing, continuous water heater, and fermentation energy balance.

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