Panskura Banamali College

(Autonomous)

Panskura R.S., Purba Medinipur

West Bengal -721152

Value-added Course

On

Laboratory-Based Bio-fertilizer Production

(BITHVAC 001)

(w.e.f. 2022-23)

Offered by: Department of Biotechnology

COURSE INFORMATION IN BRIEF

Course Name: **Laboratory-Based Bio-fertilizer Production**

Course type: Value-added Course

Medium: English

Mode: Blended (For Theory – online; For Practical – Offline)

Intake Capacity: Minimum 20; Maximum 40

Eligibility: Biotechnology Students from across College

Duration: 30 Hrs. (To complete within a time span of two months)

Course Fees: Rs.300.00 (Rupees Three hundred only)

Coordinator: Palash Pan

Contact: +918900364172; biotechpbc@rediffmail.com; trustupal@gmail.com

Course Learning Objectives:

1. To produce Laboratory based Bio-fertilizer
2. Effect of Bio-fertilizer to the plantlet

Course Learning Outcomes:

1. Specific strain isolation technique (axenic culture techniques through selective media) from a particular source
2. Learning about various biochemical tests for N-fixing and P-solubilizing assay
3. Learning of quality control techniques, mostly demanded by industries
4. Ensuring Practical field experience to check product effect

Title of the Course:

Laboratory-Based Bio-fertilizer Production

Syllabus **(Period- 30 Hrs.)**

1. Isolation and Inoculum preparation for suitablestrainsn especially *Rhizobium sp./Azotobacter sp./ Azospirillum sp./VAM*
2. Selection and production of the carrier molecule
3. Checking of N- fixing activity
4. Checking of P-solubilizing activity
5. Quality control after production
6. Implementation of the plantlet

Major Reference for the course:

Nur, H. L. A., Hoe, P. C. K., Ying, P. L. W., Rosnani, A. R., Ahmad, N. A. W., Anis, N. M. F. M., & Khairuddin, A. R. The Journey of Biofertilizer Project in Nuclear Malaysia (2002-2017).