

# SYLLABUS

of the

**Value-added Course**

## **BASIC CONCEPT OF HEART RATE VARIABILITY**

**(PESSVAC 001)**

(w.e.f. 2022-2023)



**Offered by:**

**DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS  
SCIENCE**

**Panskura Banamali College**

**(AUTONOMOUS)**

**Panskura R.S., Purba Medinipur**

**West Bengal – 721152**

## **COURSE INFORMATION IN BRIEF**

**Course Name:** *BASIC CONCEPT OF HEART RATE VARIABILITY*

**Course Contents:** The Course consists of 1 theory and 1 practical paper:  
Theory : 'Basic concept of heart rate variability'  
Practical : 'Practical application & interpretation of heart rate variability in sports'

**Course Type:** Value-added Course  
(Optional, additional, and not a part of the CBCS curriculum)

**Medium:** English

**Mode:** Blended

**Intake:** Minimum 10; Maximum 30

**Eligibility:** M.P.Ed/ M.Sc in Sports Science or allied disciplines

**Duration:** 30 hours (to complete within a time span of 2 months)

**Course Fees:** Rs. 300/-

**Coordinator:** **SRI. SUBHASHIS BISWAS**

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## Structure & Contents

### **Group-A Theory (Basic concept of heart rate variability)**

1. Definition and related terms
2. Historical overview of heart rate variability;
3. Physiological mechanism of heart rate variability;
4. Different types of measures (Time domain – Frequency domain – Nonlinear)
5. Application of heart rate variability in sports (physical-physiological-psychological)

### **Group-B Practical (Application & interpretation of heart rate variability in sports)**

1. Wearable devices to measure heart rate variability (Heart rate monitors- Electrocardiogram)
2. Data Collection procedures (RR intervals recordings) – Data export – Artifact correction – data sorting- Data analysis – interpretation (manually & software );

### **Suggested Readings**

1. *Task Force of the European Society of Cardiology. (1996). Heart rate variability, standards of measurement, physiological interpretation, and clinical use. Circulation, 93, 1043-1065.*
2. *Gernot Ernst (2014). Heart rate variability, Springer London, 978-1-4471-4308-6, Published: 21 November 2013, <https://doi.org/10.1007/978-1-4471-4309-3>*