



DEPARTMENT OF BIOMEDICAL ENGINEERING

B.E. Biomedical Engineering

(R 2021) Semester – II

BIOSCIENCES LABORATORY

COURSE OBJECTIVES:

To provide practice on:

- Estimation and quantification of biomolecules.
- Separation of macromolecules.
- Use Compound microscope
- Practice on chemical examinations, Histopathological examinations etc

LIST OF EXPERIMENTS:

1. Preparation of solutions: 1) percentage solutions, 2) molar solutions, 3) normal solutions
2. Standardization of pH meter, preparation of buffers, emulsions.
3. Spectroscopy: Determination of absorption maxima ($\lambda_{\max}$) of a given solution
4. General tests for carbohydrates, proteins and lipids.
5. Identification of Blood Collection Tubes and Phlebotomy equipment
6. Preparation of serum and plasma from blood
7. Estimation of Haemoglobin and blood glucose
8. Estimation of creatinine, urea and Uric acid
9. Separation of proteins by SDS electrophoresis(Demo) and amino acids by thin layer chromatography (Demo).
10. Urine physical and chemical examination (protein, reducing substances, ketones, bilirubin and blood)
11. Basic staining – Hematoxylin and eosin staining.
12. Special stains – cresyl fast Blue (CFV)- Trichrome – oil red O – PAS
13. Types of Staining : Simple stain, Gram stain

- [illegible]



PGP COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Accredited by **NAAC**





PGP COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Accredited by **NAAC**



 GPS Map Camera



Google

Namakkal, Tamil Nadu, India

Pgp College Rd, Tamil Nadu 637207, India, Namakkal,
Tamil Nadu 637207, India

Lat 11.173033° Long 78.046209°

26/06/2025 09:38 AM GMT +05:30



PGP COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Accredited by **NAAC**



Keerambur, Tamil Nadu, India

7, Nh44, Above Pgp College Of Engineering And Technology, Keerambur, Tamil Nadu 637207, India

Lat 11.174054° Long 78.045531°

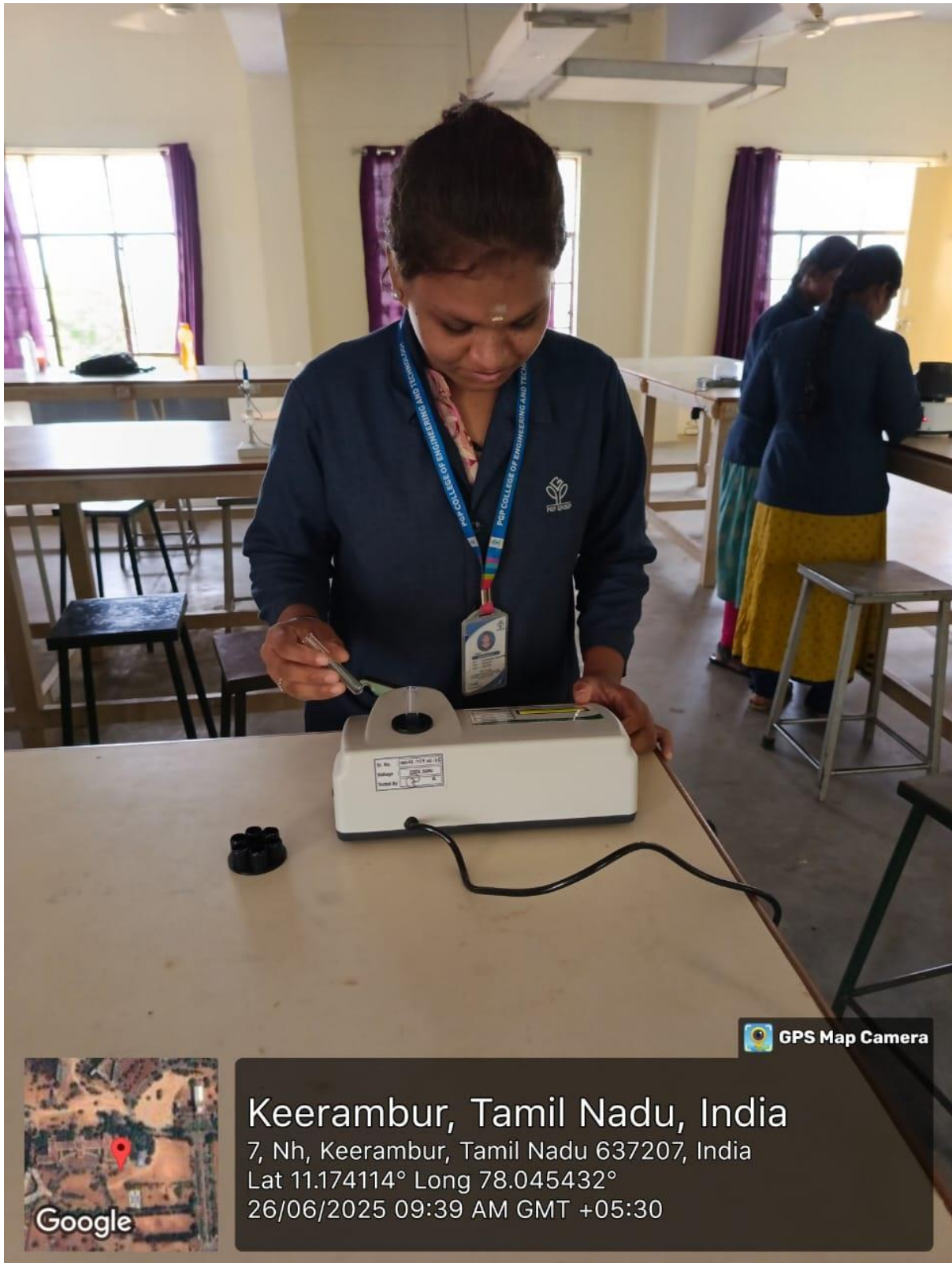
26/06/2025 09:38 AM GMT +05:30



PGP COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Accredited by **NAAC**



GPS Map Camera



Keerambur, Tamil Nadu, India

7, Nh, Keerambur, Tamil Nadu 637207, India

Lat 11.174114° Long 78.045432°

26/06/2025 09:39 AM GMT +05:30