BT620 BIOSENSORS

Instructor: Prof. Pranab Goswami

Department: BSBE

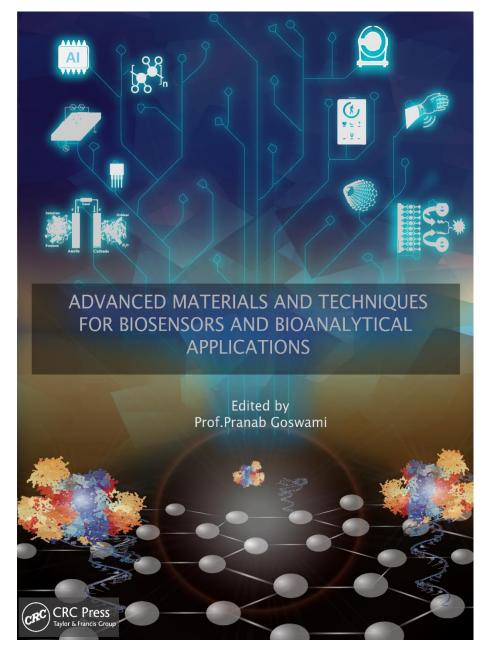
Session: July-November 2024

BT 620 BIOSENSORS (3-0-0-6)

Syllabus

Introduction; General configuration of biosensor; Generations of biosensors; Basic principle and instrumentation of different biosensors: electrochemical, optical, acoustic, piezoelectric, and calorimetric biosensors; Biological recognition systems: enzyme, antibody, nucleic acid, cell, and tissue; Properties of ideal materials for biosensors; Classes of materials for biosensors: polymers, material containing metal complex, sol-gel materials, nanomaterials, composite materials, metal oxides, photonic crystals, and zeolite materials; Application of biosensors for food and fermentation processes, environment monitoring, and clinical diagnostics.

Advanced Materials and Techniques for Biosensors and Bioanalytical Applications, (ed) Pranab Goswami, CRC Press Tailor & Francis, New York, London (2020)



https://www.amazon.com/Materials-Techniques-Biosensors-Bioanalytical-Applications/dp/0367539659

https://www.taylorfrancis.com/books/97810 03083856

https://books.google.co.in/books/about/Advance d_Materials_and_Techniques_for_Bi.html?id=f3-JzQEACAAJ&redir_esc=y

https://drukkerijmiddelburg.nl/advancedmaterials-and-techniques-for-biosensors-andbioanalytical-applications-9780367539658

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> Hardcover from £155.00

EVALUATION

Total marks: 100

Quiz 1: 10 : 28th August (Wednesday)

Quiz II: 10 : 30th October(Wednesday)

Assignmets: 10 : after midsem

Midsem: 30 : as per institute TT

Endsem: 40 : as per institute TT

- ✓ Must comply institute rule on attendance.
- ✓ Attendance will not be recorded after TA collected the attendance and left the class.
- ✓ No mobile phone, laptop /palmtop etc. allowed during the class.

THANKS