(BM-101) - Introduction to Biomedical Engineering

Course Outline:

Theory:

1. **Biomedical Engineering**
    1. What is biomedical engineering
    2. Branches of biomedical engineering
    3. Role of biomedical engineer
2. **Devices used in Biomedical Engineering**
    1. Biomedical instrumentation fundamental
    2. Critical care devices used in biomedical engineering
    3. Radiological instrumentation.
    4. Diagnostic biomedical devices
    5. Therapeutic Biomedical devices
3. **Applications of Biomedical Engineering**
    1. Rehabilitation Engineering
    2. Physiological modelling and simulation
    3. Biomedical signal processing
    4. Clinical Engineering
    5. Biomaterials
    6. Biomechanics
    7. Tissue Engineering and regenerative medicine
    8. Neural engineering
    9. Medical Image Processing

Suggested Teaching Methodology:

- Lecturing
- Written Assignments Guest Speaker
- Report Writing

Suggested Assessment:

Theory (100%)

- Sessional (20%)
- Quiz (12%)
- Assignment (8%)
- Midterm (30%)
- Final Term (50%)

Text and Reference books::

1. Introduction to Biomedical Engineering, 4th Edition, John Enderle
2. Biomedical Engineering Handbook Volume I & II, J. D. Bronzino

---