**BBE1203 Mechanics**

Course description

Course objectives

Course content

 Fluid Dynamic: Fluid properties - Similarity of fluid flows - Conservation equations - Conservation of mass - momentum Newton Secondlaw - Energy conservation of Mechanical Energy (Bernoulli Equation). Application: flow through pipes: laminar and turbulent - pipes connected in series or in parallel - branching of pipes - Measuring Devices - Mathematical models - body fluid and their function - haemodynamic models - A report writing.

 Thermodynamics: Gas mixture definitions - First and second laws of thermodynamics-Carnot cycle, Maxwell's relations-Gibbs-Helmholtz equation-Free energy of reactions, activity coefficients, equilibrium, refrigerations, steam.

Methods of delivery

Modes of Assessment

Reference Materials

Requirements

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hours per Semester | | | | Weighted  Total Mark | Weighted  Exam Mark | Weighted  Continuous  Assessment Mark | Credit  Units |
| LH | PH | TH | CH | WTM | WEM | WCM | CU |
| 45 | 00 | 30 | 60 | 100 | 60 | 40 | 4 |