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| **No** | **List of Topics** | **Contact hours** |
| **1** | **Concept of Safety, Safety Standards** | **1** |
| **2** | **General Safety** | **4** |
|  | 2.1 Important definitions (hazard, risk, accident, incident, etc.)2.2 Types of emergencies 2.3 Emergency evacuations 2.4 Emergency Action Plans2.5 Important safety signs2.6 Emergency aid equipment (safety shower, eye wash, first aid kit, fire blanket, etc.)2.7 Fire and classifications of fire2.8 Firefighting techniques2.9 Types of fire extinguishers and use of each type2.10 Housekeeping and its importance2.11 Electrical hazards and control measures2.12 Personal protective equipment (PPE’s) |  |
| **3** | **Industrial and Lab Safety hazards and their controls** | 2 |
|  | 3.1 Importance of laboratory safety3.2 Types of Machinery hazards (mechanical, electrical, chemical)3.3 Machinery safeguards types and safe handling techniques3.4 Handheld tools hazards and control measures3.5 Power tools hazards and control measures3.6 Manual handling injuries, handling hazards and their control measures |  |
| **4** | **Management of Safety and Health, Promoting a safety culture** | 1 |
| **Total** | 8 |

**REFERENCE TEXTBOOKS AND OTHER TEACHING AIDS:**

1. “Occupational Safety and Health for Technologists, Engineers, and Managers” by David L. Goetsch, ISBN-13: 9780137408900, Pearson
2. “Fundamental Principles of Occupational Health and Safety” by Benjamin O. Alli, ISBN 978-92-2-120454-1, International Labour Office, GENEVA
3. “Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards” by National Academies Press (US); 2011
4. “Recommended Practices for Safety and Health Programs” by [www.osha.gov/safetymanagement](http://www.osha.gov/safetymanagement)