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| **12 Health and safety principles and coverage** |   |
| Criteria | Range | Resource identified |
| 12.1 The main requirements of key health and safety legislation applicable to engineering activities | Legislation –The Health and Safety at Work Act (HASAWA) 1974Management of Health and Safety at Work Regulations 1992Provision and Use of Work Equipment Regulations (PUWER) 1998Personal Protective Equipment (PPE) RegulationsThe Control of Noise at Work RegulationsManual handling operations regulations 1992Lifting operations and lifting equipment regulations (LOLER) 1998Electricity at Work Regulations 1989Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013Control of Substances Hazardous to Health (COSHH) 2002 | <https://www.worksafe.uk.com/health-and-safety-legislation/> |
| <https://www.hse.gov.uk/pubns/hsc13.pdf> |
| <https://worksmart.org.uk/health-advice/health-and-safety/employer-duties/what-are-main-health-and-safety-regulations> |
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| 12.2 The importance of health and safety practices within the workplace | How health and safety legislation affects the frequency of accidents and related incidents.The importance of mental health and wellbeing in the workplace.The persons responsible for ensuring compliance – employer, employee, Health and Safety Executive (HSE). Implications of non-compliance. | <https://www.elearnuk.co.uk/uploads/courses/191.pdf> |
| <https://iosh.com/more/news-listing/why-health-and-safety-is-important/> |
| <https://www.hse.gov.uk/treework/training-is-important.htm> |
| <https://www.oshcr.org/what-are-the-benefits-of-following-health-and-safety-practices/> |
| 12.3 Responsibilities for health and safety | Responsibilities – Individual, employee and employer obligations, local, national, and global requirements | <https://www.hse.gov.uk/workers/employers.htm> |
| <https://www.hse.gov.uk/workers/responsibilities.htm> |
| <https://www.hse.gov.uk/managing/legal.htm> |
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| 12.4 Risk assessment | Stages of risk assessment – Identification of hazards (hazard and operability study (HAZOP), hazard identification (HAZID)), evaluation of risks (likelihood, severity, number of people affected), implementation of control measures (hierarchy of control: elimination, reduction/substitution, isolation, controls, administration/training/safe system of work, PPE) | <https://www.hse.gov.uk/simple-health-safety/risk/steps-needed-to-manage-risk.htm> |
| <https://www.riskassessor.net/news/detail/five-steps-to-risk-assessment> |
| <https://www.hse.gov.uk/construction/lwit/assets/downloads/hierarchy-risk-controls.pdf> |
| <https://en.wikipedia.org/wiki/Hierarchy_of_hazard_controls> |
| <https://www.cdc.gov/niosh/topics/hierarchy/default.html> |
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| 12.5 Health and safety considerations in specific engineering contexts | Considerations – Safe systems of work, oxygen use in the workplace, asphyxiation hazards, heat, moving parts, fire and explosion hazards, fire safety, guarding, manual handling, permit to work, lock out tag out (LOTO), maintenance | <https://www.allianz.co.uk/risk-management/risk-topics/health-safety/safe-systems-of-work.html> |
| <https://www.agg-net.com/documents/health-safety-risk-management-system/safety/s25-risk-assessment-safe-systems-of-work> |
| <https://app.croneri.co.uk/topics/safe-systems-work/indepth> |
| <https://www.hse.gov.uk/msd/manual-handling/index.htm> |
| <https://www.hse.gov.uk/coshh/basics/permits.htm> |
| <https://www.lockout-tagout.co.uk/Lockout%20Tagout%20Procedure.php> |
| Contexts – Chemicals, equipment with moving parts, confined spaces, electrical testing, high voltage electrical (generation, distribution, isolation and storage) | <https://www.hse.gov.uk/pubns/indg258.pdf> |
| <https://www.hse.gov.uk/coshh/basics/substance.htm> |
| <https://www.hse.gov.uk/pubns/priced/hsg85.pdf> |
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