

**Department of Public Health
Institute of Social & Cultural Studies
Faculty of Behavioral & Social Sciences
University of the Punjab, Lahore**

Course Outline

Programme	BS Workplace Health & Safety Promotion	Course Code	WHSP 404	Credit Hours	3
Course Title	Occupational and Environmental Hygiene				

WHSP 404- Occupational and Environmental Hygiene

Course Description

- This course introduces students to the field of occupational health and hygiene. Health and safety practitioners and professionals require knowledge of key principles and concepts to address the wide range of hazards and risks of illness and disease at the workplace.
- Students will consider the relationship between the body and occupational illness and diseases. Topics include, occupational diseases and physical agents, hazardous substances and harm to health and accessing harm from exposure to environmental agents

Course Objectives

After studying this course, students should be able to:

1. Describe the role of occupational health and hygiene at the workplace
2. Anticipate, recognize, evaluate, and control factors in the workplace and the environment that may cause illness, injury, or impairment
3. Demonstrate an understanding of major occupational and disease at the workplace
4. Discuss the harm of hazardous substances and physical agents at work.
5. Demonstrate an understanding of occupational hygiene concepts and principles at the workplace
6. Outline strategies for assessing and controlling physical and environmental hazards

Course Contents

- Understanding the Human Body
- Introduction to Toxicology
- Occupational Exposure Limit Values
- Hazardous Substances

- Biological Hazards
- Vibration and Noise
- Exposure assessment
- Radiation protection
- Personal protective equipment
- Respiratory protection
- Contaminant Control Ventilation
- Quality of the indoor environment
- Noise reduction
- Sampling and instrumentation
- Thermal Environment
- Ergonomics
- Assessing Health Risks
- Monitoring Airborne Contaminants
- Biological Monitoring
- Understand, interpret, and apply occupational and environmental standards and regulations
- Behavior and Culture
- Control Methods
- Workplace Stress

Practical Contents

- Industrial visits to observe implementation of occupational and environmental hygiene (OEH) standards
- OEH assessment and Development of OEH plan for different industries (Assignment)

Teaching-Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work and practical demonstrations. Short videos/films will be shown on occasion.

Assignments

The sessional work will be a combination of written assignments, class quizzes, presentation, hand-on practical exercises and class participation/attendance.

Assessments and Examination

Sessional Work: 25 marks

Midterm Exam: 35 marks

Final Exam: 40 marks

Recommended Readings

1. Gardiner, K., & Harrington, J. M. (Eds.). (2008). *Occupational hygiene*. John Wiley & Sons.
2. Tranter, M. (2020). *Occupational hygiene and risk management*. Routledge.

3. Aitken, R. J., Creely, K. S., & Tran, C. L. (2004). *Nanoparticles: an occupational hygiene review* (Vol. 274). London: HSE books.
4. MAIDMENT, S. C. (1998). Occupational hygiene considerations in the development of a structured approach to select chemical control strategies. *The Annals of Occupational Hygiene*, 42(6), 391-400.
5. Zisook, R. E., Monnot, A., Parker, J., Gaffney, S., Dotson, S., & Unice, K. (2020). Assessing and managing the risks of COVID-19 in the workplace: Applying industrial hygiene (IH)/occupational and environmental health and safety (OEHS) frameworks. *Toxicology and Industrial Health*, 36(9), 607-618.
6. Reed, S., Pisaniello, D, Benke, G, Ed. (2019). Principles of Occupational Health and Hygiene: An Introduction. Australia, Allen & Unwin.
7. The American Industrial Hygiene Foundation (AIHF). Basic Principles of Occupational Hygiene. <https://www.aiha.org/education/elearning/online-courses/basic-principles-of-occupational-hygiene>
8. Bratanegara, A. S., Somantri, L., Astari, A. J., Ihsan, M. H., & Aliyan, S. A. (2022, November). The important of environmental awareness and industrial hygiene for workers. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1089, No. 1, p. 012073). IOP Publishing.
9. Lindström, I., Lantto, J., Karvala, K., Soini, S., Ylinen, K., Suojalehto, H., & Suuronen, K. (2021). Occupations and exposure events in acute and subacute irritant-induced asthma. *Occupational and environmental medicine*, 78(11), 793-800.