



PhD Entrance Examination Syllabus in Public Health

University Curriculum Framework

For Admission to Doctor of Philosophy (PhD) Programmes in Public Health

1. Purpose

This syllabus provides a standardized framework for assessing the academic preparedness, analytical ability, research aptitude, ethical reasoning, and public health competencies of candidates seeking admission to PhD programmes in Public Health.

2. Objectives

The entrance examination aims to:

- Assess foundational and advanced knowledge in public health.
- Evaluate research aptitude and scientific reasoning.
- Assess quantitative, qualitative, and mixed-methods research competencies.
- Examine ethical understanding in health research and practice.
- Measure analytical, logical, and critical thinking abilities.
- Identify candidates capable of independent doctoral-level inquiry.
- Evaluate awareness of contemporary global and national public health challenges.

3. Detailed Syllabus

A. Epidemiology

- Epidemiological concepts and measures
- Study designs
- Bias, confounding and effect modification
- Screening and diagnostic testing
- Disease surveillance
- Outbreak investigation
- Causal inference
- Infectious disease epidemiology
- Non-communicable disease epidemiology

B. Public Health Foundations

- History and evolution of public health
- Social determinants of health
- Health promotion and disease prevention
- Environmental and occupational health
- Maternal, newborn, child and adolescent health
- Nutrition and food systems
- Mental health
- Ageing and geriatric health
- One Health approach

C. Health Systems and Policy

- Health systems frameworks
- Universal Health Coverage
- Primary Health Care
- Health financing
- Human resources for health
- Health policy analysis
- Public-private partnerships
- Health technology assessment
- Digital health and health informatics
- Health economics

D. Contemporary and Emerging Issues

- Climate change and health
- Pandemic preparedness and response
- Planetary health
- Migration and health
- Urban health
- Precision public health
- Genomics and population health
- Digital epidemiology
- Misinformation and health communication
- Sustainable Development Goals (SDGs)
- Global health security

5. Expected Competencies

Candidates should demonstrate:

- Critical thinking and scholarly inquiry
- Ability to interpret scientific evidence
- Understanding of ethical research conduct
- Knowledge of public health systems and policies
- Data interpretation and statistical reasoning
- Awareness of contemporary global health challenges

6. Suggested Reading

Public Health and Epidemiology References

1. Park K. *Park's Textbook of Preventive and Social Medicine*. 28th ed. Jabalpur: Banarsidas Bhanot Publishers; 2025. Available from: Banarsidas Bhanot Publishers
2. Celentano DD, Szklo M, Farag YMK. *Gordis Epidemiology*. 7th ed. Philadelphia: Elsevier; 2025. Available from: [Elsevier Gordis Epidemiology](#)
3. Rothman KJ, Lash TL, VanderWeele TJ, Haneuse S. *Modern Epidemiology*. 4th ed. Philadelphia: Wolters Kluwer; 2024. Available from: Modern Epidemiology Publisher Page

Health Systems and Policy

4. World Health Organization. *World Health Report: Health Systems Financing—The Path to Universal Coverage*. Geneva: WHO; 2010. Available from: [World Health Organization](#)
5. Frenk J. *The Global Health System: Strengthening National Health Systems as the Next Step for Global Progress*. PLoS Med. 2010;7(1):e1000089.
6. Mills A, Gilson L. *Health Economics for Developing Countries: A Survival Kit*. Geneva: WHO; 1990.

Global Health and Contemporary Public Health

7. World Health Organization. *World Health Statistics 2025*. Geneva: WHO; 2025. Available from: [WHO World Health Statistics](#)
8. United Nations. *Transforming Our World: The 2030 Agenda for Sustainable Development*. New York: United Nations; 2015. Available from: [United Nations Sustainable Development Goals](#)
9. Kickbusch I, Gleicher D. *Governance for Health in the 21st Century*. Copenhagen: WHO Regional Office for Europe; 2012.
10. Horton R, Beaglehole R, Bonita R, Raeburn J, McKee M, Wall S. From public to planetary health: a manifesto. *Lancet*. 2014;383(9920):847.

Recommended Journals for PhD Entrance Preparation

- [The Lancet Public Health](#)

- [BMJ Public Health](#)
- [American Journal of Public Health](#)
- [BMC Public Health](#)
- [International Journal of Epidemiology](#)