

M. Sc. Epidemiology

Preamble:

Epidemiology is very valuable in all branches of Health Sciences. Knowledge of epidemiology in live sciences like Medicine, Dentistry, Nursing, Physiotherapy etc. can be imparted after basic graduation in these fields. It is anticipated that graduates will occupy positions as research administrators, program managers, analysts and evaluators in universities, health departments, governmental agencies and similar organizations.

Objectives :

1. To impart training In Epidemiology to all branches of Health Sciences to enable them to understand principles and practice of epidemiology for improvement in service and research in their respective speciality.
2. Demonstrate knowledge and understanding of theory and practice in the core epidemiology disciplines (Statistics, social sciences, health policy and health economics)
3. Demonstrate specialised knowledge and skills in other areas relevant to public Health from a wide range of options (e.g. primary health care, medial anthropology, epidemiology and control of malaria and population studies.
4. Apply these skills to identify and assess public health problems in developing countries and evaluate actions designed to improve public health.
5. Formulate public health strategies and approaches to public health problems appropriate to a given culture and environment.

Eligibility Criteria:

Recognised Bachelor's Degree in any branch of Health sciences by respective councils.

Course Eligibility:

Applicants fulfilling the following criteria are eligible to apply for the course:

- a. MBBS degree recognized by the Medical Council of India;
- b. Current position in Public Health, preferably in State or Central service or in Medical Institutions, sponsored on deputation for two years on a full time basis to NIE;
- c. Three years experience in public health/surveillance activities after MBBS;
- d. Age below 45 years as on the date of commencement of the Course (i.e., 1 January each year). May be relaxed by five years for applicants with desirable experience.
- e. Private candidates who fulfil the above eligibility criteria

Duration of course: Two Years and one year exemption for M.B.B.S. graduates.

Selection of Candidates: Common Entrance Test of University.

Medium of Instruction: English
Attendance: 80%
Departments Required: PSM/ Community Medicine; Biostatistics

Names of Faculty: Core Faculty

1. Dr. Asha K. Pratinidhi Director of Research, KIMSDU, Karad.
2. Dr. Prakash M. Durgawale Professor & HOD, Dept. of Comm. Med. KIMS, Karad.
3. Dr. Mrs. Vaishali V. Raje. Associate Professor, Dept. of Comm. Med. KIMS, Karad.
4. Dr. Mrs. Supriya S. Patil. Assistant Professor, Dept. of Comm. Med. KIMS, Karad.
5. Dr. Satish V. Kakade Statistician, Dept. of Comm. Med. KIMS, Karad.

Visiting Faculty

Dr. Sanjay Mehendale. Director, NIE, Chennai
Dr. Vidya Ramchandran. Director, NIE, Chennai
Dr. Udaykumar. Statistician

Epidemiology Syllabus

For two year course (4 semesters)

Semester I

- Basic principles of Epidemiology
 - Dynamics of disease transmission.
 - Measuring occurrence of disease – Morbidity Mortality etc.
 - Measuring validity and reliability of diagnostic and screening tests.
 - Natural History of Disease

- Epidemiologic Methods. Descriptive and analytical.
- Different types of epidemiological studies. Descriptive, observational and interventional studies.

Semester II

- Biostatistics in public Health.
- Biostatistics in Research.

Semester III

- Infectious disease Epidemiology.
- Chronic disease Epidemiology
- Epidemiology of policy, public health programme. Health services etc.
- Roles of Genetic and Environmental Factors in Disease Causation.

Semester IV

- Monitoring and evaluation of 4 services / programs.
- Writing and reviewing scientific papers.
- Study design: writing scientific papers.

Dissertation work on relevant topic on epidemiology during first III semesters

Books

TEXT BOOKS AND OTHER REFERENCES

1. Maxy Roseman John M. Last. Maxcy-Roseman Public Health and Preventive Medicine, Appleton-Century-Crofit, Newyork
2. Hobson W., The Theory and Practice of Public Health, Oxford Med. Publication
3. Barker D.J.P. Practical Epidemiology, Churchill Livingstone.
4. Park J. E. & K. Park. Text book of P. & S.M. M/S Banarsidasm Bhanot.
5. Mahajan B.K. and M. C. Gupta, Text book of P & S. M. Jaypee Publications.

6. Sir Austin Bradford Hill, Principles of Medical Statistics, the Lancet Ltd. No.7 Adam Street, Adelphine, London, 1967.
7. John J. Hanlon, Public Health Administration and Practice, MOSBY.
8. Mac. Mohan & Pugh Epidemiology Principles and Methods, Little Brown & Co. Boston. U.S.A.
9. Robert S. Goodheart Maulice E.Shills, Modern Nurtitionin Health, K. M. Varghes & Co.
10. Mawner & Kramer, Epid: An Introductory Text, 1985 W.B. Sanuders Co.,
11. Hunters Diseases of Occupations: Edited by P.A.B. Raffle, P.H. Adams, P. J. Baxter and W. R. Lee Edward Arnold Publishers (1994), Great Britain.
12. Committee reports and policy documents- medical education and health policy;
 1. Bhore Committee Report (1946) **Health Survey and Development Committee**, Govt. of India, Delhi.
 2. Mudaliar Committee Report (1961) **Health Survey and Planning Committee**, Govt. of India, Delhi.
 3. Shrivastav Report (1974). **Health Services and Medical Education-A Programme for immediate action, Group on Medical Education and Support Manpower, Ministry of Health and Family Welfare**, Govt. of India. New Delhi.
 4. ICSSR/ICMR (1981).**Health for All- An alternative strategy- Report of a Joint study group of ICSSR/ICMR**. Indian Institute of Education, Pune.
 5. National Health Policy, (1982) **Ministry of Health and Family Welfare**, Govt. of India, New Delhi.
 6. **Compendium of Recommendation of various committees on health and Development (1943)-1975**.Central Bureau of Health Intelligence (1985) Directorate General of Health Services, Ministry of Health and Family Planning, New Delhi.
 7. Bajaj, J. S. etal (1990) **Draft National Education Policy for Health Sciences, I.J.M.E.**, Vol. 29, No.1 &2(Jan-August 1990)

Additional Reading:

1. Indian Council of Medical Research, "Policy Statement of Ethical considerations involved in Research on Human Subjects", 1982, ICMR New Delhi.
2. Code of Medical Ethics framed under section 33 of the Indian Medical Council Act.1956. Medical Council of India, Kotla Road, New Delhi.
3. Francis C.M. Medical Ethics, J. P. Publication, Bangalore, 1993.
4. Indian National Science Academy, Guidelines for care and use of animals in Scientific Research, New Delhi,1994.
5. Internal National Committee of Medical Journal Editors, Uniform requirements for manuscripts submitted to biomedical journal , N Eng. J. Med 1991: 424-8.
6. Kirkwood B. R., Essentials of Medical Statistics, 1st Ed Oxford: Blackwell Scientific Publications 1988.

7. Mahajan B.K. Methods in Bio statistics for medical students, 5th Ed. New Delhi. Jaypee Brothers Medical Publishers, 1989.

Journals:

1. Indian Journal of Community Medicine.
2. Indian Journal of Public Health.
3. Indian Journal of Community Health
4. Journal of Communicable Diseases.
5. Indian Journal of Maternal & Child Health.
6. Indian Journal of Preventive & Social Medicine.
7. Indian Journal of Occupational Health & Industrial Medicine.
8. Indian Journal of Medical Research
9. National Medical Journal of India.
10. Indian Journal of Malariology.
11. Indian Journal of Environmental Health.
12. Indian journal of Medical Education.
13. Journal of Indian Medical Association.
14. Journal of Medicine, Paediatrics, OBG, Skin & STD, Leprosy, Tuberculosis & Chest Diseases (For Reference)

International Journals:

1. WHO Publications- All
2. Journal of Epidemiology & Community Health.
3. Tropical Diseases Bulletin.
4. Vaccine.
5. American Journal of Public Health.
6. Lancet.
7. New England Journal of Medicine.

Scheme of examinations

- At end of each semester one theory paper of 100 marks pertaining to syllabus completed in the same term)

Question paper pattern:

Total FIVE Questions each carrying equal marks (20 each) to be divided into two parts.

Total Theory = 100 x 4 = 400

Practical:

- At end of first three semesters practical examination of 50 marks each will be conducted.
- In IV Term before final exam Dissertation presentation – 50 marks and Defence of Dissertation – 100 marks.

Total (Practicals) For 3rd semesters = $50 \times 3 = 150$

For 4th semesters = $\frac{150}{300}$

Passing criteria: As per University M. Sc. rules.