

Introduction to Public Health Informatics

Course No. [Ignore for (A)]	Proposed
Structure	L : 3 T : 0 P : 0 C : 6
Content	Introduction to public health with emphasis on health promotion and disease prevention. History of public health work, Role of government in health, public health policies, mapping and surveillance techniques for controlling diseases, models for efficient and knowledge based public health work, environmental issues in public health. Introduction to global health, health inequities. Epidemic and pandemic preparedness, Role of informatics in public health and global health Introduction to biomedical informatics and public health informatics, Standards in Biomedical and public health Informatics, Ethics in Biomedical and Health Informatics: Users, Standards, and Outcomes, Evaluation of Biomedical and Health Information Resources, Patient-Centered Care Systems, Patient Monitoring Systems, Clinical Research Informatics Introduction to ethics in healthcare and its importance. Issues in Clinical ethics and Research ethics. Studying application of healthcare technology and ethical issues. Overview of the Clinical Research Process. WHO Principles of Good Clinical Practice. Ethical Conduct Good Clinical Practice. Protocol. Review by Independent Ethics Committee/ Independent Review Board. Protocol Compliance. Informed Consent Biomedical Ethical Principles. Investigator Qualifications. Staff Qualifications. Records. Confidentiality/Privacy.
Texts and References (including e-books)	1) Edward H. Shortliffe • James J. Cimino, Biomedical Informatics Computer Applications in Health Care and Biomedicine Fourth Edition, Springer 2) Schneider, M. (2011). Introduction to Public Health. United States: Jones & Bartlett Learning. 3) Principles of clinical ethics and their application to practice. Basil Varkey, Med. Princ. Pract. 2021:30:17-28 4) Selected papers and reading material will be shared 5) Good clinical practice: Online resource for certification https://gcp.nidatraining.org/

Academic Programme :

Undergraduate (UG): ✓ **B.Tech 2nd/3rd year (for Minor) or 4th year (for IDDDP)**

Type : ✓ **Core** (i) **Duration:** ✓ **Full Semester**

(ii) **To be offered normally in:** ✓ **2nd Semester**

Credit Structure : L : 3 T : 0 P : 0 C : 6
(L: lectures, T: tutorials, P: practicals, C: total credits)
*(C = 2(L+T)+P for Full Semester ; C = L+T+0.5*P for Half Semester.*
In case of Studio or other modes, the contact hours may be converted to equivalent L/T/P)

Name(s) of other Academic units to whom the course may be relevant:

BSBE, CSE, CHE

Pre-requisites, if any
 BB101

Content (List of the topics/sub-topics to be covered in the lectures/practicals/assignments):

- Introduction to public health with emphasis on health promotion and disease prevention.
- History of public health work, Role of government in health, public health policies and interventions
- Introduction to global health, health inequities, Epidemic and pandemic preparedness, Environmental issues in public health.
- Mapping and surveillance techniques for controlling diseases, models for efficient and knowledge based public health work
- Introduction to biomedical informatics and public health informatics, role of informatics in public health and global health Standards in Biomedical and public health Informatics
- Evaluation of Biomedical and Health Information Resources, Patient-Centered Care Systems, Patient Monitoring Systems, Clinical Research Informatics
- Introduction to ethics in healthcare and its importance. Issues in Clinical ethics and Research ethics.
- Studying application of healthcare technology and ethical issues. Main principles of medical ethics
- Overview of the Clinical Research Process. WHO Principles of Good Clinical Practice. Ethical Conduct Good Clinical Practice. Protocol.
- Review by Independent Ethics Committee/ Independent Review Board. Protocol Compliance. Informed Consent Roles and responsibilities of Principal. Investigator Qualifications. Staff Qualifications. Records.
- Confidentiality and data /Privacy.

Texts / References (The total number to be restricted to 6 – 8 . Web references may be given, especially for e-books.) Complete details of Texts/References should be provided. **Book:** Authors (Initials & Last name), Title, Edition (Optional), Publisher, Year. **Journal Articles:** Authors (Initials & Last name), Title, Journal name, Volume, Page nos., Year. **Web References:** Authors/Organization, Title, Year (if available), URL.). For e-references mention the e-link.

- Edward H. Shortliffe • James J. Cimino, Biomedical Informatics Computer Applications in Health Care and Biomedicine Fourth Edition, Springer
- Schneider, M. (2011). Introduction to Public Health. United States: Jones & Bartlett Learning
- Principles of clinical ethics and their application to practice. Basil Varkey, Med. Princ. Pract. 2021;30:17-28
- Selected papers and reading material will be shared
- Good clinical practice: Online resource for certification <https://gcp.nidatraining.org/>