**Course: 352-521 Epidemiological Methods I** ⭘ Secondary responsibilities ⚫ Main responsibilities

**7 PLOs with 10 CLOs**

| **Program learning outcomes (PLOs)** |  | **Course Learning Outcomes (CLOs)** | **Teaching and learning approach** | **Student assessment** | **Topics in this subject** |
| --- | --- | --- | --- | --- | --- |
| PLO1 To generate morally and ethically sound research. | ⭘ | CLO1 Students acknowledge basic ethical and legal principles pertaining to the collection, maintenance, and use of epidemiologic data. | 1. Pre-read module 2. Discussion about ethical issue on relevant topics in the lecture session. | 1. Class attendance  2. Active discussion in the class | * Measurement & Data Collection * Research and Development in Health |
| PLO2 To design research studies in response to the needs of stakeholders. | ⚫ | CLO2 Students can select the appropriate epidemiological research techniques for a research problem, with considerations for the needs of stakeholders. | 1. Discussion on stakeholder identification and research questions | 1. Class attendance  2. Active discussion in the class | - Research and Development in Health |
| PLO3 To use information technology to search health-related information for research. |  |  |  |  |  |
| PLO4 To relate theoretical health concepts into research through critical appraisal of the evidence. | ⚫ | CLO3 Students can explain basic health concepts related to interventions for solving public health problem.  CLO4 Students can apply the principles of epidemiology toward critical appraisal of journal articles with discussions pertaining to solutions to public health problems. | 1. Pre-read module, journal and assignment 2. Discussion of journal and assignment in the lecture session 3. Discussion of case research study 4. Answering the exercise in module | 1. Class attendance  2. Active discussion in the class  3. Written examination | * + Measures in Epidemiology   + Causation & Association   + Bias   + Confounding & Interaction   + Measurement & Data Collection   + Sampling Technique   + Burden of disease & DALY |
| PLO5 To generate community-based, community-oriented, community-participating field research with skills in leadership and problem-solving. | ⭘ | CLO5 Students can explain epidemiological concepts in community-based research planning. | 1. Discussion of case research studies | 1. Class attendance  2. Active discussion in the class | - Research and Development in Health  - Measurement & Data Collection  - Sampling Technique |
| PLO6 To appropriately appraise research findings amidst the evolving state of knowledge in epidemiology. | ⭘ | CLO6 Students can apply epidemiological concepts pertaining to the interpretation of research findings. | 1. Pre-read module, journal and assignment 2. Discussion of journal and assignment in the lecture session 3. Discussion of case research study 4. Answering the exercise in module | 1. Class attendance  2. Written examination | * + Confounding & Interaction   + Measurement & Data Collection   + Burden of disease & DALY |
| PLO7 To demonstrate mastery of principles of epidemiology and statistics in relation to health research. | ⭘ | CLO7 Students can describe basic concepts of epidemiology and statistics necessary for conducting health research  CLO8 Student can interpret the statistical outputs used in epidemiological studies. | 1. Pre-read module, journal and assignment 2. Discussion of journal and assignment in the lecture session 3. Discussion of case research study 4. Answering the exercise in module | 1. Class attendance  2. Written examination | * Measures in Epidemiology * Causation & Association * Bias * Confounding & Interaction * Measurement & Data Collection * Sampling Technique * Burden of disease & DALY |
| PLO8 To analyze big or complex data with clear presentation advocating appropriate usage of the findings. |  |  |  |  |  |
| PLO9 To produce high-quality research article(s) translatable to policy and practice. | ⚫ | CLO2 Students can select the appropriate epidemiological research techniques for a research problem, with considerations for the needs of stakeholders.  CLO9 Students can describe a public health problem in terms of magnitude, person, time and place.  CLO10. Students can describe the principles and limitations of epidemiological research methodology | 1. Pre-read module, journal and assignment 2. Discussion of journal and assignment in the lecture session 3. Discussion of case research study 4. Answering the exercise in module | **MSc**  The manuscript from the thesis is accepted for publication in a proceeding of international research conference.  **PhD**  The manuscript from the thesis is accepted for publication as an original article in international journal well known on peer review. | - Research and Development in Health Student   * Measures in Epidemiology * Causation & Association * Bias * Confounding & Interaction * Measurement & Data Collection * Sampling Technique   Burden of disease & DALY |

**Matrixes PLOs and CLOs of 352-521 Epidemiological Methods I**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **CLOs** | | | | | | | | | | |
| **PLOs** |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | ⭘ | x |  |  |  |  |  |  |  |  |  |
| 2 | ⚫ |  | x |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |  |
| 4 | ⚫ |  |  | x | x |  |  |  |  |  |  |
| 5 | ⭘ |  |  |  |  | x |  |  |  |  |  |
| 6 | ⭘ |  |  |  |  |  | x |  |  |  |  |
| 7 | ⭘ |  |  |  |  |  |  | x | x |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |  |
| 9 | ⚫ |  | x |  |  |  |  |  |  | x | x |