**Course: 352-525 Epidemiological Methods II** ⭘ Secondary responsibilities ⚫ Main responsibilities

**8 PLOs and 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. | ⚫ | 1. Students can demonstrate the important ethical issues for health research.

2. Students can demonstrate the essential information needed in the information sheet and consent form for research participants. | 1. Pre-read research protocols and discussion of the ethical aspects in the lecture session.
2. Watching video of research scandals and discussion of the ethical aspects in the class.
3. Discussion about ethical issue on screening test.
4. Practice online in the website of Collaborative Institutional Training Initiative (CITI) for Good Clinical Practice (GCP).
 | 1. Class attendance
2. Active discussion on the pre-read assignment
3. A certificate of CITI for GCP online.
 | - Ethical issues in research studies (quantitative and social research)- Screening test |
| PLO2 To design research studies in response to the needs of stakeholders. | ⚫ | 3. Students can demonstrate the identification of stakeholders in a research work.4. Students can indicate the study design based on the plan of thesis proposal developed. | 1. Pre-read module, journal and assignment.2. Discussion on stakeholders and study designs that the students planned to develop for thesis proposal. | 1. Active participation in the discussion session. 2. Take-home short essay examination. | - Survey/Community experimental- Discussion- Proposal writing |
| 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. | ⚫ | 5. Students can interpret the research evidence in different study designs of relevant public health, policies and medical practices using the epidemiological principles. | 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 attendance2. Active discussion on the pre-read assignment3. Written examination | - Descriptive study- Survey- Case-control studies- Cohort study- Clinical trial- Screening and diagnostic tests- Systematic review of RCTs |
| PLO5 To generate community-based, community-oriented, community-participating field research with skills in leadership and problem-solving. | ⭘ | 6. Students can explain appropriate research methodology for a given community-based research study  | 1. Pre-read module and discussion of community experiment aspects in the lecture session.
2. Discussion on a list of true/false questions.
3. Answering the exercise in module.
 | 1. Take-home short essay examination | - Survey/Community experimental |
| PLO6 To appropriately appraise research findings amidst the evolving state of knowledge in epidemiology. | ⚫ | 7. Students can interpret analyses results from different research study design.8. Students can calculate the statistics in different study design. | 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 attendance2. Active discussion on the pre-read assignment3. Written examination | - Descriptive study- Survey- Case-control studies- Cohort study- Clinical trial- Screening and diagnostic tests- Systematic review of RCTs |
| PLO7 To demonstrate mastery of principles of epidemiology and statistics in relation to health research. | ⭘ | 5. Students can interpret the research evidence in different study designs of relevant public health, policies and medical practices using the epidemiological principles.9. Students can compare epidemiological study design and related statistics.  | 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 attendance2. Active discussion on the pre-read assignment3. Written examination | - Descriptive study- Survey- Case-control studies- Cohort study- Clinical trial- Screening and diagnostic tests- Systematic review of RCTs |
| PLO8 To analyze big or complex data with clear presentation advocating appropriate usage of the findings. | ⭘ | 10. Students can explain the principles of measurement in epidemiology with regard to data collection tool and instrument (e.g., validity and reliability).  | 1. Pre-read module, journal and assignment.
2. Discussion of journal and assignment in the lecture session.
3. Answering the exercise in module.
 | 1. Class attendance2. Active discussion on the pre-read assignment3. Written examination | - Validity and reliability |
| PLO9 To produce high-quality research article(s) translatable to policy and practice. | ⚫ | 3. Students can demonstrate the identification of stakeholders in a research work.5. Students can interpret the research evidence in different study designs of relevant public health, policies and medical practices using the epidemiological principles.9. Students can compare epidemiological study design and related statistics.  | 1. Pre-read module, journal and assignment.
2. Discussion of journal and assignment in the lecture session.
3. Answering the exercise in module.
 | 1. Class attendance2. Active discussion on the pre-read assignment3. Take-home short essay examination4. Written examination  | - Survey/Community experimental- Discussion- Descriptive study- Survey- Case-control studies- Cohort study- Clinical trial- Screening and diagnostic tests- Systematic review of RCTs - Proposal writing |

**Matrixes PLOs and CLOs of 352-525 Epidemiological Methods**

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