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| Course   | Principle and Application in Health Research Methods   |
| Course No.   | 01ER431  |
| Credits  | 3 credits  |
| Grade  | 1 <sup>st</sup> year   |
| Timetable  | Spring AB  |
| Instructor   | Kuo-Liong Chien, Chuhsing Kate Hsiao, Ming-Chin Yang, Wei J. Chen, Hsien-Ho Lin  |
| Course Overview  | The aim of this course is to introduce concepts of study design, data collection and statistical analysis commonly used in public health research with a strong focus in global health. The module will be delivered over one semester, as a blend of small group work and lectures, practical exercises, group project, presentation and in-class discussion of reading tasks.  |
| Remarks  | Conducted in English at National Taiwan University   |
| Course Type  | Lecture  |
| Link between Course Objectives and Activities          | Students will study the public health research methodologies which are applicable to challenge food and health issues.   |
| Academic Goal  | To be able to explain and apply concepts of study design, data collection and statistical analysis commonly used in public health research with a strong focus in global health.   |
| Course Schedule  | <ol style="list-style-type: none"> <li>1. Introduction to systematic review and meta-analysis</li> <li>2. Identifying a Study Question</li> <li>3. Practice of identifying the study question</li> <li>4. Cross-Sectional Surveys: Rationale, Design, and Data Collection</li> <li>5. Case-Control Studies: Rationale, Design, and Data Collection</li> <li>6. Cohort Studies: Rationale, Design, and Data Collection</li> <li>7. Writing Exercise: Background, Objectives and Methods of the proposal</li> <li>8. Evaluation of health service: Rationale, Design, and Data Collection</li> <li>9. Experimental Studies: Rationale, Design, and Data Collection</li> <li>10. Miscellaneous Types of Studies: Ecological Studies, Case Series, Qualitative Studies, and Systematic Reviews</li> <li>11. Students' Mid-Term Presentation</li> <li>12. Data Analysis: Data Management, Descriptive Analysis, and Comparative Statistics</li> <li>13. Data Analysis: Advanced Statistics</li> <li>14. Research Ethics</li> <li>15. Completing a Full Proposal</li> <li>16. Poster and Oral Presentations</li> <li>17. Submitting and Publishing Results in Academic Journals</li> <li>18. Students' Final Presentation</li> </ol> |
| Course Prerequisites and Advisories                    |  |
| Grading Philosophy (Percentage/ Criteria/ Methodology) | Class participation (10%), Mid-term presentation (20%), Final presentation (20%), Final written report (50%).  |
| Self-Directed Learning Other Than Coursework           | Read materials introduced in class   |
| Textbooks, References and Supplementary Materials      | <ol style="list-style-type: none"> <li>1. Jacobsen, Kathryn H (2012) Introduction to Health Research Methods: A Practical Guide. Sudbury, Massachusetts: Jones &amp; Bartlett Learning. Suggested reading:</li> <li>2. Bowling, Ann (2009) Research Methods in Health: Investigating Health and</li> </ol>   |

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|  | <p>Health Services New York, NY: McGraw Hill/Open University Press.</p> <p>3. Ogden, Thomas E (2002) Research Proposals: A Guide to Success. San Diego, Calif. : Academic Press.</p> <p>Supplementary material will be distributed during the class.</p>   |
| Office Hours   | <p>Name: Kuo-Liong Chien</p> <p>Every Wednesday 16:30-17:20</p>  |
| Other (i.e. Expectations on Classroom, Conduct and Decorum etc.) | <p>1. Active participations in the discussion and presentation of reading tasks are requirements for all students.</p> <p>2. On the completion of this course, students will identify a specific research topic related to global health and use the skills and knowledge taught in the course to undertake a critical review of the literature relating to the identified research topic/problem, design a study to investigate the problem, and write an appropriate protocol for conducting a research project on the topic, including ethical aspects of their research. Course Syllabus<br/> <a href="https://nol.ntu.edu.tw/nol/coursesearch/print_table.php?course_id=...">https://nol.ntu.edu.tw/nol/coursesearch/print_table.php?course_id=...</a> 1 / 3 2016/11/28 17:02</p> <p>3. For the mid-term presentation, each student is required to do a 15-minutes presentation on her/his identified research topic. The content of presentation should include a preliminary report of background, literature search strategy and research hypotheses.</p> <p>4. For the final presentation, each student is required to do a 15-minutes presentation on her/his research proposal for the identified topic. The content of presentation should include a report of background, literature review, research hypotheses, study design and statistical methods.</p> <p>5. Each student is required to submit a final written report in the format of a research project proposal, including project title and sections on research background, literature review, materials and methods, and expected outcomes.</p> |
| Related Courses  | Contemporary Issues in Global Health, Environmental and Occupational Health  |
| Keywords   | Global Health, Public Health, Methodology  |