Course	Measuring burden of disease: methods and applications
Course No.	01ER433
Credits	2 credits
Grade	1st year
Timetable	Spring AB
Instructor	Hsien-Ho Lin, Shu-Sen Chang
Course Overview	The measurement and quantification of population health could assist health policy making and priority setting. In the past few years there have been major advancements in burden of disease research, mainly led and stimulated by the Global Burden of Disease Study (GBD). This course will give an overview on the concepts and methods used to quantify the burden of disease at the national and global level. The GBD will be a main focus of this course, but other alternative approaches will also be reviewed. The course consists of lectures, computer labs, a hands-on group-based project, and a field visit to the Department of Statistics of Ministry of Health and Welfare.
Remarks	Conducted in English at National Taiwan University
Course Type	Lecture
Link between Course Objectives and Activities	Students will study health security issues through studying Global burden of Disease Study.
Academic Goal	At the end of the course the students are expected to: 1. Understand the key concepts and elements in burden of disease studies 2. Comment on the strengths and limitations of burden of disease studies 3. Understand the estimating procedures of the GBD study 4. Be familiar with and be able to use the major databases of GBD while acknowledging their limitations
Course Schedule	1. Measuring burden of diseases, injuries, and risk factors: what, why, and how 2. Global Health Cost Effectiveness Analysis. YLL and Life table 3. YLD: incidence-based and prevalence-based approach Disability weights 4. Cause of death and Garbage code 5. Estimating burden of disease from health expenditures 6. Life table and garbage code redistribution 7. Measuring the burden of risk factors: comparative risk assessment (CRA) I 8. Measuring the burden of risk factors: comparative risk assessment (CRA) II 9. Mid-term progress report preparation 10. Measuring the burden of injuries and mental illness 11. Benchmarking, Forecasting 12. National burden of disease studies in Taiwan 13. National infectious disease surveillance and health open data in Taiwan, Field visit to Taiwan CDC 14. Application of GBD results 15. Quantification of disease burden using loss of QALE (quality-adjusted life expectancy) 16. Evidence-based health policy making; evaluation of health system performance 17. Final project presentation
Course Prerequisites and Advisories	
Grading Philosophy (Percentage/ Criteria/ Methodology)	Participation in the class (50%) and a final report (50%).

Self-Directed Learning Other Than Coursework	Read materials introduced in class
Textbooks, References and Supplementary Materials	To be introduced in the class
Office Hours	Name: Hsien-Ho Lin By appointment only
Other (i.e. Expectations on Classroom, Conduct and Decorum etc.)	
Related Courses	Principle and Application in Health Research Methods, Environmental and Occupational Health
Keywords	