

<p><b>Course Name:</b> <b>HLTH 323/3.0</b></p> <p>Epidemiology</p>	<p><b>Course Instructor:</b>  Dr. Eun-Young Lee</p>	<p><b>Contact Hours:</b> Winter 2021 – Remote Delivery</p>																																																					
		<p><b>Prerequisite:</b> (KNPE 251/3.0 or STAT_Options) and HLTH 252/3.0.</p> <p>Level 3 or above in a HLTH, KINE, or PHED plan. Limited spaces are available to students in the LISC(H) and BCHM(H) Plans.</p>																																																					
		<p><b>Exclusion:</b> May not be taken with or after EPID 301/3.0.</p>																																																					
<p><b>Course Description:</b></p> <p>The course offers epidemiological ways of understanding threats to population health. The course covers basic epidemiology principles, concepts, and procedures useful in the surveillance and investigation of people's health: methods involved in researching the distribution and determinants of health in populations, core measurement issues (e.g., rates, standardization, association), interpretation issues (e.g., bias, confounding, interaction), and epidemiological approaches to study design including descriptive, observational (cross-sectional, cohort, case-control), and experimental (randomized controlled trials, community trials). The course also introduces learners to critical epidemiology and population health research.</p>		<p><b>Course Notes:</b></p> <p>Available on OnQ.</p>																																																					
<p><b>Intended Student Learning Outcomes:</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 20%;"><i>Do What (Verb)</i></th> <th style="text-align: left; width: 30%;"><i>With What (Content)</i></th> <th style="text-align: left; width: 50%;"><i>For What (Result)</i></th> </tr> </thead> <tbody> <tr> <td>Learn</td> <td>Principles and history of epidemiology research</td> <td>To appreciate the field of epidemiology</td> </tr> <tr> <td>Quantify</td> <td>Rates and measures used in epidemiology and public health</td> <td>To understand their meaning and know how to do the calculations</td> </tr> <tr> <td>Understand</td> <td>Different study designs used in epidemiology research</td> <td>To understand how epidemiology studies are conducted</td> </tr> <tr> <td>Critique</td> <td>Scientific articles in the epidemiology field</td> <td>To determine strengths and weaknesses of existing studies, to identify gaps in the literature, and to reiterate important study findings</td> </tr> <tr> <td>Value</td> <td>The applications of epidemiology research</td> <td>To appreciate how epidemiology research is used to influence health policy and practice</td> </tr> <tr> <td>Communicate</td> <td>Effective communication techniques</td> <td>To show your ability to enhance others understanding of a topic area</td> </tr> <tr> <td>Collaborate</td> <td>With instructors and peers</td> <td>To learn and demonstrate ability to work in a team environment</td> </tr> <tr> <td>Practice</td> <td>In a manner consistent with that used in a professional working environment</td> <td>To develop and demonstrate appropriate communication skills</td> </tr> <tr> <td>Act</td> <td>In a manner consistent with academic integrity and professional practice</td> <td>To display scholastic and professional competence</td> </tr> <tr> <td>Develop</td> <td>A research plan in the field of epidemiology</td> <td>To demonstrate knowledge and understanding of literature, epidemiological principles, epidemiology research methods, written communication skills, and ability to work in a team environment</td> </tr> </tbody> </table>		<i>Do What (Verb)</i>	<i>With What (Content)</i>	<i>For What (Result)</i>	Learn	Principles and history of epidemiology research	To appreciate the field of epidemiology	Quantify	Rates and measures used in epidemiology and public health	To understand their meaning and know how to do the calculations	Understand	Different study designs used in epidemiology research	To understand how epidemiology studies are conducted	Critique	Scientific articles in the epidemiology field	To determine strengths and weaknesses of existing studies, to identify gaps in the literature, and to reiterate important study findings	Value	The applications of epidemiology research	To appreciate how epidemiology research is used to influence health policy and practice	Communicate	Effective communication techniques	To show your ability to enhance others understanding of a topic area	Collaborate	With instructors and peers	To learn and demonstrate ability to work in a team environment	Practice	In a manner consistent with that used in a professional working environment	To develop and demonstrate appropriate communication skills	Act	In a manner consistent with academic integrity and professional practice	To display scholastic and professional competence	Develop	A research plan in the field of epidemiology	To demonstrate knowledge and understanding of literature, epidemiological principles, epidemiology research methods, written communication skills, and ability to work in a team environment	<p><b>Course Evaluation:</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Assignment #1 (Quiz) Pass/fail</td> <td style="width: 20%;"></td> </tr> <tr> <td>Assignment #2 (Quiz)</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Assignment #3</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Assignment #4 (Written assignment)</td> <td style="text-align: right;">15%</td> </tr> <tr> <td>Assignment #5 (Quiz)</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Assignment #6 (Quiz)</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Assignment #7 (Written assignment)</td> <td style="text-align: right;">15%</td> </tr> <tr> <td>Assignment #8 (Quiz)</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Assignment #9 (Quiz)</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Assignment #10 (KT product)</td> <td style="text-align: right;">10%</td> </tr> </table>	Assignment #1 (Quiz) Pass/fail		Assignment #2 (Quiz)	10%	Assignment #3	10%	Assignment #4 (Written assignment)	15%	Assignment #5 (Quiz)	10%	Assignment #6 (Quiz)	10%	Assignment #7 (Written assignment)	15%	Assignment #8 (Quiz)	10%	Assignment #9 (Quiz)	10%	Assignment #10 (KT product)	10%
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Generate	Novel research questions	To demonstrate ability to think outside the box and develop innovative ideas	
<b>Course Outline</b>			
Introduction and Course Overview		Screening for Disease Detection	
Introduction to Epidemiology		Descriptive Studies	
Basic Epidemiological Principles		Case-Control Studies	
Overview of Study Design Strategies		Cohort Studies	
Applications in Public Health		Case-control/cohort Studies	
Common Measures and Rates		Quasi-experimental Studies	
Association and Causation		Research Proposals/Conducting a Literature Search	
Assessing Accuracy/Rates and Measures		Critical Epidemiology and Health Studies	
Bias & Confounding		Conducting a Critical Appraisal	
Ecological Studies/ Cross-Sectional Studies		Randomized Controlled Trials	
Systematic Review & Meta-Analysis		Knowledge Translation	