Molecular Epidemiology of Infectious Disease



This senior seminar course will provide a broad overview of the application of modern molecular and genomics methods to infectious disease epidemiology. Topics will include the identification, classification, characterization, and monitoring of pathogens in human populations; the application of molecular methods to screening, prevention and treatment of infectious diseases; and the analysis of molecular and genomics data for disease. Globally relevant diseases such as salmonellosis, TB, COVID, and influenza will be highlighted.

TOPICS

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| * Pandemic response * Outbreak investigation * Genomic epidemiology * High-throughput sequencing * Microbial population structure * Microbial genomics | * Outbreak investigation * Bioinformatics * Molecular diagnosis * Molecular typing * Public health surveillance * Disease control and prevention |

INSTRUCTOR

William Hsiao

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| Microbial genomics and bioinformatics scientist |  |  |  |  |

Diagram

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Diagram

Description automatically generated with low confidence

Chart, scatter chart

Description automatically generated

Chart

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