Minnesota State University Moorhead

BIOL 615: Principles of Infectious Diseases

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This graduate-level course will cover principles of infectious disease. The course is intended to provide students with knowledge of infectious disease related terminology and epidemiology. With daily discussion posts, students will delve into current topics in infectious disease, and public health approach to management of infectious disease. The course will also provide students with an exposure to research methods in infectious disease.

B. COURSE EFFECTIVE DATES: 02/02/2019 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Common concepts in Infectious Disease epidemiology:
incubation period, virulence, reservoir, period of communicability, prodromal period, infective dose, diagnosis, disease course, treatment [if any], susceptible populations, vectors, classification and characteristics of disease agents, relationship between agent, host and environment, cells and molecules involved in mediating host-pathogen interactions.
2. Characteristics of disease hosts relevant to infectious disease acquisition: Host characteristics that influence susceptibility to infectious diseases (i.e., age, sex, behavior, social environment, immunity, history of travel, occupation).
3. The role of the environment in infectious disease acquisition: Effect of temperature (climate change), humidity, water quality, geography, locality.
4. The role of vaccination in infectious disease prevention: Differences between natural and acquired immunity, available vaccines for various infectious diseases and target audience for vaccination, strengths and weaknesses of vaccines and vaccination programs.

D. LEARNING OUTCOMES (General)

1. Students will be able to identify key concepts in infectious disease through weekly online quizzes.
2. Students will be able to summarize their thoughts about current infectious disease related topics in daily discussion posts.
3. Students will be able to apply their knowledge to a case study in infectious disease.
4. Students will be able to analyze the key findings from primary literature in infectious disease.
5. Students will be able to design a grant proposal to address an infectious disease related problem.
6. Students will be able to critique a grant proposal submitted by their peers.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted