EUROPEAN CAMPUS
R O T T A L - I N N

DEGGENDORF INSTITUTE OF TECHNOLOGY **DIT**

PFARRKIRCHEN, GERMANY

DigiHealthDay-2020
GLOBAL DIGITAL HEALTH — TODAY, TOMORROW, AND BEYOND

13 NOV 2020

WEBINAR: Applied Public Health Informatics
June 8-11, 2020, 14:00-17:15 (CEST)
Speaker: Dr. Brian E. Dixon (USA)

ABSTRACT

Public health informatics applies the theories and methods of computer and information science to support the work of public health organizations, which is to improve health outcomes for populations and communities. Over the past 20 years, informatics methods and approaches have helped address challenges in public health. For example, early warning information systems help public health officials identify disease outbreaks and monitor the spread of diseases, including Ebola and the 2019 novel coronavirus (nCoV). Information technologies and standards have further revolutionized data collection and exchange to facilitate management of Big Data. Analytics and visualization methods are supporting decision-making at county, state, and national levels.

This seminar describes the principles, methods, and current state of public health informatics. We examine common public health information systems and the informatics methods used to support disease outbreak detection. The seminar further explores the tools and methods used by public health organizations to manage the growing array of Big Data available to support development of health policies and the implementation of population health interventions. The seminar will use case studies as well as hands-on learning with informatics tools to analyze health data to examine and solve real-world public health challenges, including disease detection and identification of social determinants that impact population health outcomes.

COURSE DESCRIPTION

This course introduces the field of public health informatics. Core aspects of informatics relevant to the collection, management, and application of public health data will be reviewed. Examples are drawn from core public health functions, such as vital records, surveillance, immunization, and community health assessment.

PREREQUISITES

None

LEARNING OBJECTIVES

At the end of this course, students will be able to:

1) Define the scientific field of study known as informatics and discuss how informatics contributes to public and population health.

2) Define a public health surveillance system and contrast with the concept of an information system.

3) List and describe key informatics roles at various levels of the public health enterprise.

4) Identify and describe common data sets used in global public health, especially for understanding the epidemiology of disease and health disparities.

5) Describe the public health infrastructure and how electronic health records, health information exchanges, and clinical decision support technologies support it.

6) List and describe commonly used public health data standards, including the WHO International Classification of Disease.

7) List and describe common information systems used in public health organizations, such as the Ministry of Health.

8) Discuss governance strategies for managing large data sets collected and organized by public health at local, regional, and national levels.

CLASS FORMAT AND DELIVERY

The class will be delivered in a virtual setting using Microsoft Teams. The instructor will provide two 90-minute lectures each day across a series of 4 days. The lectures will introduce students to the topics outlined below and cover the specified learning objectives. Discussion will be used to engage students where possible using the MS Teams platform.

COURSE TOPICS AND SCHEDULE			
Date	Time (CEST)	Topic	Readings(s)
Monday, 8th June 2020	14:00 - 15:30	Introduction to Public Health Informatics	1, 3
	15:45 - 17:15	Population Health Data	7
Tuesday 9th June 2020	14:00 - 15:30	Public Health Information Systems	15
	15:45 - 17:15	The Public Health Information Infrastructure	6
Wednesday 10th June 2020	14:00 - 15:30	Informatics for Disease Prevention and Epidemiology	14
	15:45 - 17:15	Syndromic Surveillance Systems	17
Thursday 11th June 2020	14:00 - 15:30	Global Public Health Informatics	25
	15:45 - 17:15	National Informatics Strategies	26