



INSTITUTE FOR
INTERNATIONAL
MEDICINE

Professional Certificate Course in Epidemiology Syllabus

Course Directors:

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Learning Support:

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Competency Objectives:

At the completion of the INMED Professional Certificate Course in Epidemiology, learners will be able to demonstrate using case-studies and simulation:

- Vision and achievements of epidemiology
- Primary measures of health and disease
- Types of epidemiological studies and their application
- Basic concepts of biostatistics and their application to research interpretation
- Establishing the cause of a disease
- Application of primary, secondary, and tertiary prevention
- Surveillance of and response to infectious diseases
- Analysis of natural history, prognosis, and treatment of disease
- Leading issues in environmental, occupational, and injury epidemiology
- Role of policy, health planning, and the planning cycle

Certificate Course Description:

This Professional Certificate Course is a structured, 10-weeks online learning experience. The Course particularly addresses the following subjects:

- Introduction to Epidemiology
- Measurement of Health and Disease
- Epidemiological Studies
- Basic biostatistics Concepts

- Causation in Epidemiology
- Epidemiology of Non-Communicable Diseases
- Epidemiology of Communicable Diseases
- Clinical Epidemiology
- Environmental and Occupational Epidemiology
- Health Policy, and Planning

Textbook provided via download:

World Health Organization: *Basic Epidemiology* (2nd ed) by R. Bonita, R. Beaglehole, T. Kjellström, and WHO; 2006.

Computing Requirements:

Each learner must have access to a personal computer capable of wireless Internet access for the online assignments, in-class sessions, and for participation in the final examinations.

Weekly Assignments:

Epidemiology Week One Online: Introduction to Epidemiology

Content:

Lesson 1 What Is Epidemiology?
 Lesson 2 Epidemiology and Public Health
 Lesson 3 Achievements in Epidemiology

Assignments to be completed by 11:55 pm, on Sunday:

- Participate in the Introduction to Epidemiology content, Lessons 1-3, and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Two Online: Measuring Health and Disease

Content:

Lesson 1 Defining Health and Disease
 Lesson 2 Using Available Information
 Lesson 3 Morbidity and Disability

Assignments to be completed by 11:55 pm, on Sunday:

- Participate in the Measuring Health and Disease content, Lessons 1-3, and complete the Post-Test for this subject

- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Three Online: Epidemiology Studies

Content:

Lesson 1 Observational Epidemiology

Lesson 2 Experimental Epidemiology

Lesson 3 Potential Errors in Epidemiological Studies

Assignments to be completed by 11:55 pm, on Sunday:

- Participate in the Epidemiology Studies content, and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Four Online: Basic Biostatistical Concepts

Content:

Lesson 1 Displaying Statistical Information

Lesson 2 Summary Numbers

Lesson 3 Statistical Inference

Assignments to be completed by 11:55 pm, on Sunday:

- Participate in the Basic Biostatistical Concepts content, and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Five Online: Causation in Epidemiology

Content:

Lesson 1 The Concept of Cause

Lesson 2 Establishing the Cause of a Disease

Assignments to be completed by 11:55 pm, on Sunday:

- Participate in the Causation in Epidemiology, and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Six Online: Epidemiology of Non-Communicable Diseases

Content:

Lesson 1 Scope of Prevention
Lesson 2 Levels of Prevention
Lesson 3 Screening for Disease

Assignments to be completed by 11:55 pm, on Sunday:

- Participate in the Epidemiology of Non-Communicable Diseases content and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Seven Online: Epidemiology of Communicable Diseases

Content:

Lesson 1 Burden of Communicable Diseases
Lesson 2 Chain of Infection
Lesson 3 Investigation and Control of Epidemics

Assignments to be completed by 11:55 pm, Sunday:

- Participate in the Epidemiology of Communicable Diseases content and complete the Post-Test for this Subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Eight Online: Clinical Epidemiology

Content:

Lesson 1 Normality and Abnormality
Lesson 2 Effectiveness of Treatment

Assignments to be completed by 11:55 pm, Sunday:

- Participate in the Clinical Epidemiology content and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Nine Online: Environmental and Occupational Epidemiology

Content:

Lesson 1 Environment and Health
Lesson 2 Exposure and Dose

Lesson 3 Assessing Risk

Assignments to be completed by 11:55 pm, Sunday:

- Participate in the Environmental and Occupational Epidemiology content, and complete the Post-Test for this subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Epidemiology Week Ten Online: Health Policy and Planning

Content:

Lesson 1 Health Policy in Practice

Lesson 2 Health Planning Cycle

Assignments to be completed by 11:55 pm, Sunday:

- Participate in the Health Policy and Planning content, and complete the Post-Test for this Subject
- Read the assigned journal article
- Complete the Discussion Board Assignments

Final Exam:

All learners will login together for the Epidemiology Final Exam on the assigned date and time.

Explanation of Assignments:

The following section describes course assignments, performance expectations, and Professional Certificate Course evaluation.

Due Dates: All assignments are due on Sunday at 11:55 pm of the week they are assigned.

Punctuality: This is a professional level course. All assignments are expected to be submitted on time. Any learner who becomes more than two weeks behind in submitting any assignment is subject to dismissal from the course. If dismissal occurs, the learner will be granted one opportunity to re-enroll in an upcoming course at no additional tuition payment.

Professionalism Requirement: This is a learning experience for professionals. Assignments are expected to be completed with excellence.

Content Participation: Learners are required to fully participate in the course content, including pre-tests, interactive questions, and post-tests.

Assigned Articles: Each week, two journal articles are assigned for learners to critically review, including one posted question on the subject of each article.

Discussion Board Participation: Learners are required to post one response to each of these questions, and respond to at least one fellow classmate's responses, stating with what they agree or disagree with about the response and why. A post that simply agrees with something someone else said without further explanation is not satisfactory and will be counted as if there were no post.

Exercises: Each week learners will complete an assigned exercise that requires application of the information studied. The completed exercise will then be submitted to the instructor.

Learner Evaluation:

Assessment of learner's performance will be based upon:

- Participation in all Course activities, including online learning and submission of all assignments
- Achievement of 80% or greater on all Post-Tests and Final Exam
- Complete the Discussion Board Individual Assignments
- Completion of the Certificate Evaluation and Credit Claims form.

Final Exam: The final exam is composed of 60 multiple-choice questions. An excellent review for these exams is thorough mastery of the entire course content.

Learners whose evaluation is acceptable will receive the INMED Professional Certificate in Epidemiology. Those learners whose evaluation is not acceptable will receive a certificate of participation and the opportunity to remunerate.

Remediation:

If a learner does not complete this course and achieve the required competencies, the faculty may require the learner to 1) remediate the component(s) that the learner did not satisfactorily complete, or 2) repeat the entire course within one year of the start date of the original course. The learner will be offered only one opportunity to repeat the course without requiring repeat payment of tuition.

Academic Integrity:

This is a professional-level learning experience. All learners are expected to be self-motivated, to perform with excellence, and to be thoroughly honest

throughout their process of learning. If any INMED faculty determines that a learner has committed academic dishonesty by plagiarism, cheating or in any other manner, the faculty member has the right to 1) fail the learner for the particular assignment, project and/or exam, 2) fail the learner for the entire course, 3) discharge the learner from any future INMED learning experience, including degree, diploma, or certificate completion.

Withdrawal and Refund Policy:

75 percent refunds for course registration are available before the 1st day of the course. 50 percent refunds are available through the 1st week of the course. No refunds are available after the 1st week. If a course participant desires to cancel his/her enrollment, he/she has the choice to request a refund or to apply his/her payment to a future INMED Professional Certificate Course. All payments made to INMED must be in US dollars.

INMED reserves the right to cancel individual sessions or the entire course. In the event of a course cancellation, a full tuition refund will be made.

Core Faculty:

Nicholas Comninellis, MD, MPH, DIMPH
Dean & President, Institute for International Medicine

Nicholas Comninellis is Dean and President of INMED, the Institute for International Medicine. He is also faculty in the Department of Medical Humanities at the University of Missouri-Kansas City (UMKC) School of Medicine and faculty at Research Medical Center Family Medicine Residency. Over two years Dr. Comninellis served inner city citizens at Shanghai Charity Hospital. Over another two years he led a healthcare ministry in the war-besieged nation of Angola in southern Africa. Dr. Comninellis next served for six years in the Kansas City public hospital before launching INMED in 2003. He graduated from UMKC School of Medicine and Saint Louis University School of Public Health, and was a family medicine resident at John Peter Smith Hospital. Dr. Comninellis also earned a professional diploma in tropical medicine from the Walter Reed Army Institute of Research, and became board certified in both public health and family medicine. Among his authored books are *Shanghai Doctor*, *Where Do I Go From Here*, and *INMED International Medicine & Public Health*. Dr. Comninellis is a classical guitarist and faculty advisor for UMKC Cru. He was recognized as the 2009 United Nations Association of the United States World Citizen and the 2015 University of Missouri-Kansas City Alumni of the Year.

Paul Larson, MD, MBA, DTM&H
Saint Margaret Family Medicine Residency

Following formal training in family medicine and tropical diseases (Liverpool School of Tropical Medicine), Dr. Larson practiced for two years at Kapsowar Hospital in Kenya in association with the Africa Inland Church. Returning to the USA, he completed graduate studies in medical education and a fellowship in faculty development. Today Dr. Larson is director of Global Health Education at the University of Pittsburgh Medical Center's St. Margaret Family Medicine Residency. He also continues to rigorously apply his teaching skills by supervising INMED Diploma learners at the Baptist Medical Center in northern Ghana, where by personal example and by instruction he casts a vision for the next generation of globally minded healthcare leaders.

Disclosures:

No commercial support received. No relevant financial relationships with ACCME - defined commercial interests for anyone who was in control of the content of this activity.

There is no conflict of interest for anyone (planners, faculty, authors) with the ability to control the content of this activity.