



TPaIDA

“Humanitarian Service with a Human Experience”

Introduction to the Clinical Pathology and Basic Science of Infectious Diseases

Advance Program

Course Syllabus

Faculty/Supervising Personnel:

Dr. Lane Rolling, M.D., Director of Clinical Education and Research
Dr. Sany Benites Rolling, M.D, Director of Clinical Pathology
Dr. Betty Chugga, MD., Director of Organ transplant and Infectious Diseases
Dr. Percy Inga, M.D., Director of Clinical Medicine,
Dr. Moses Sihuincha, Infectious Disease,
Dr. Martin Chincha, M.D., Internal Medicine,
Dr. Yuri Ponce, M.D., Clinical Pathology,
Dr. Gladys Patino Soto, M.D., Clinical Pathology,
Tpaيدا Staff

Course Description:

The Advance program is an Introduction into Molecular Medicine in the Diagnosis of Infectious Diseases. This is a 5 day Short course in using Molecular Biology in the diagnosis of Infectious Diseases. This is a very intensive course with Didactic and Clinical Molecular Biology. The first two days in Lima are hands on training in Rt-PCR, PCR, NAT in HIV, HBV, HCV, and CMV in diagnosis the infectious disease in real patients. Second day is based on principles in understanding of blood work and profiles in infectious diseases. The 3rd, 4th is in Cusco with more hands on training in Molecular biology, Biochemistry, Hematology, Microbiology and Infectious diseases in Cancer patients. The fifth day is Visit to Machu Picchu. You will then fly to Iquitos and assist in the Introduction Course from the 14th to the 21st December.

Students will be introduced to the basic biology of viruses, bacteria, protozoa, fungi, and parasites and the diseases they cause in humans.

Learning strategies include; lecture, hands-on laboratory work, roundtable discussions, clinical case conferences, and field study.

This course is equivalent 3-4 college credits, depending on the school, 2 credits for lecture and 2 for lab.

Course Objectives:

1. Understand the basic pathology of infectious disease and the major organisms responsible for human infectious disease.
2. Understand the basic, clinical treatment of infectious disease.
3. Understand and respect the affects that infectious diseases have on the geopolitical and cultural climates of the world.
4. Understand the various approaches to basic science and clinical medicine in another culture.
5. The use of Molecular Medicine in Diagnosis infectious diseases

Academic Content and Course Curriculum Hours:

<u>Activity</u>	<u>Hours</u>
Lecture	27.0
Roundtable	5.0
Case Conferences	4.0
Diagnostic Laboratory Rotation	23.0
Out-patient clinics and Ward Rounds	4.0
Evening Tutorials/Discussions	5.0
Special Activities	4.0
Total Contact Hours	72

Description of Teaching Formats:

Didactic lectures:

The traditional lecture format consists of: 4 hours each morning and 2.0 hours every afternoon. An additional two hours are presented during roundtable discussions.

Roundtable format:

Multiple presenters give sequential presentations on specific topics with ensuing discussion.

Diagnostic laboratory course:

Part of each day's laboratory block consists of didactic presentation pertaining to helminthology, protozoology, bacteriology, and mycology.

Laboratory practical:

Hands-on microscopy, preparation of blood films, gram stains, and acid- fast stains, KOH preps, stool concentrations for O & P and triple stains. Roche PCR Machines application

Out-patient clinic and ward rounds:

3.5 hours each day performing ward rounds in either an outpatient clinic or at a subspecialty clinic. Clinical exposure is observations, interactive and in small groups. Each participant will experience each tropical subspecialty, observing highly illustrative patients. Students will have access to advanced diagnostics to assist in case confirmation rather than presumption only.

Course Schedule: (subject to change)

Topics to be covered include; basic biology of disease causing organisms – bacteria, fungi, protozoa, viruses, helminths and Oncology

Monday December 9th

Arrive in Hospital, 7:05 a.m.

10:30 – 12:30, Orientation and Morning lecture: Basic understanding of Molecular Medicine and introduction to Roche Diagnostic equipment

1:30 – 4:30, Afternoon lectures, HIV, CMV, Hepatitis, Zika

7:00 p.m, Welcome Dinner, meet faculty – Hotel restaurant

Evening Discussions – clinical orientation

Tuesday December 10th

8:00 – 10:30, Morning lecture, Introduction to Tuberculosis, *Campylobacter jejuni*

11:00 – 4:30, Hospital rounds/clinical training

5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant

Evening Lecture – Tuberculosis pathophysiology and Gullian Barre syndrome

Evening Roundtable case discussions

Wednesday December 11th

8:00 – 10:30, Flight to Cusco

1:00 – 4:30, Introduction to PCR and Clinical Laboratory Pathology

5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant

Evening Lecture – Understanding Oncology and Pathophysiology of Cancer

Thursday December 12th

8:00 – 10:30, Transmission of Disease, field trip, visit market

11:00 – 4:30, Hospital rounds/clinical training

5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant

Evening Lecture – Introduction to general Oncology and viral relationship

Evening Roundtable case discussions

Friday December 13th

07:00 – 7:30, Machu Picchu

9:00 p.m., Dinner, evening lecture/group discussion

Saturday December 14th

Free morning in Cusco, afternoon flight to Iquitos

Sunday December 15th

Introduction to the students who you will be mentoring. Orientation and Morning lecture: Basic mechanisms of infectious disease, prokaryotes, eukaryotes, viruses. 1:30 – 4:30, Afternoon lectures, Cell structure of bacteria, eukaryotes, viruses 7:00 p.m., Welcome Dinner, meet faculty – Hotel restaurant Evening Discussions – clinical orientation

Monday December 16th

8:00 – 10:30, Morning lecture, Introduction to virology, classification of viruses 11:00 – 4:30, Hospital rounds/clinical training 5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant Evening Lecture – Viral mechanisms Evening Roundtable case discussions

Tuesday December 17th

8:00 – 10:30, Morning lecture, Introduction to parasitology, classification and general life cycles. 11:00 – 4:30, Hospital rounds/clinical training 5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant Evening Lecture – life cycles of parasites Evening Roundtable case discussions Evening Roundtable case discussions

Wednesday December 18th

8:00 – 10:30, Transmission of Disease, field trip, visit market 11:00 – 4:30, Hospital rounds/clinical training 5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant Evening Lecture – Introduction to general bacteriology, bacterial patho-physiology bacterial transmission Evening Roundtable case discussions

Thursday December 19th

8:00 – 10:30, Continue lectures - general bacteriology, bacterial patho- physiology. 11:00 – 4:30, Hospital rounds/clinical training 5:30 -7:00 p.m., Dinner, evening lecture/group discussion – Hotel restaurant Evening Lecture – bacterial transmission Evening

Roundtable case discussions.

Friday December 20th

07:00 AM Meeting at the Tourist Port of Iquitos ready for our incredible trip into the Amazon 11:00 AM We will arrive at our Amazon Lodge, we will have a short briefing and be able to check in our cabins 12:00 PM Lunch 02:00 PM Jungle walk with our guide exploring local fauna and medicinal plants used in the Amazon 05:00 PM Free time 07:00 PM Dinner 08:00 PM Talk with the Shaman 11:00 PM Rest

Saturday December 21st

07:00 AM Breakfast 08:00 AM Clinic at the native community of Yanayacu 02:00 PM Lunch 02:40 PM Time to pack the bags and do a double check of the lodge 03:00 PM Return to Iquitos 06:00 PM Arrival at Iquitos, Dinner/Awards

Sunday December 22nd

Leave Hotel for airport at 8:30 am. Arrive Lima 10 am for onward flights.