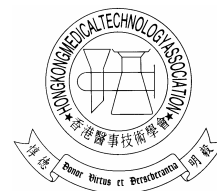




**S P A C E**  
School of  
Professional  
And  
Continuing  
Education  
香港大學專業進修學院



## **Code: AS 20-003-33 to 40 (21)**

### **Course Series in Medical Microbiology**

**Programme Leader : Dr. Wilson Ng**

**Senior Medical Technologist : Mr. Arnold Foo**

**Enquiries : 2975-5683**

**2855-4805**

### **Introduction**

The School, in collaboration with the Hong Kong Medical Technology Association (HKMTA) is organising a series of courses in Medical Microbiology for clinical laboratory personnel who were trained in other specialties but would like to acquire the knowledge and techniques to enable them to work proficiently in Medical Microbiology. “Basic Medical Microbiology Techniques” will be the first course offered in this series. It aims to provide the basic principle in microbiology diagnosis. This introductory course should prepare students for subsequent courses on the identification and differentiation of important human pathogens. These courses include ‘laboratory investigation of Gram-Positive organisms’, ‘Neisseriaceae’, ‘Spirochaetaceae’, ‘Mycobacteriaceae’, ‘Anaerobes’, ‘Enterobacteriaceae’, ‘Pseudomonadaceae’ etc. Whenever possible, an integrated diagnostic approach will be taught.

### **Objectives**

On completion of these courses, students should be able to

1. understand the safety precautions in the operation of a clinical microbiology laboratory
2. have the knowledge in the setup of the routine clinical microbiology laboratory
3. work competently in the clinical microbiology laboratory

### **Teaching staff**

W.S. Ng	<i>MSc (Strath), PhD (HK), DipApplied MicroBiol (Strath), CBiol, FIBiol (UK), FIBMS, Associate Professor, School of Professional and Continuing Education, HKU</i>
W.C. Yam	<i>FIBMS (UK); BSc (London); PhD (HK), MIBiol.; CBiol. (UK); Clinical Bacteriologist, Department of Microbiology, The University of Hong Kong</i>
W.T. Hui	<i>BSc (Napier); MMedSc (HK); FIBMS (UK), Medical Technologist, Department of Microbiology, Queen Mary Hospital</i>
Arnold S.Y. Foo	<i>BSc (East Tenn.), MSc (Virg Tech), FHKMTA, Senior Medical Technologist, School of Professional Continuing Education, HKU</i>

### **Course Content**

Please refer to the appendix for details

## Course Structure

- Generally 6 to 20 hours per course, including practical, lecture and assessment
- One 3-hour class a week, for about 2-7 weeks
- The class will usually meet on Thursdays from 6:00 to 9:00 p.m. (except for the assessment sessions which are normally held on Fridays from 7:00 – 9:00 p.m.)

## Medium of Instruction

English supplemented with Cantonese.

## Admission requirement

These courses are designed for qualified technicians/technologists. For admission, applicants are normally expected to be holders of the HKU-SPACE Ordinary Certificate (OTC) or the Hong Kong Polytechnic University's Diploma in Medical Laboratory Sciences or Registration Certificates issued by the HKSAR's Medical Laboratory Technologists (MLT) Board or their equivalents. For applicants who do not have any previous training in Medical Microbiology, the "Basic Medical Microbiology Techniques" will be a prerequisite for progression to other courses. The enrolment for the "Integrated Bacteriology Workshop" is limited to 15 students and priority is given to those who have completed all courses of the Series.

## Award and Assessment

A Statement of Achievement jointly issued by HKU SPACE and HKMTA will be awarded to students who have attended not less than 80% of the lectures and practicals and have passed the prerequisite assessment. The assessment in the form of a written and a practical examination will be held at the end of each course.

## Teaching Venue

Lectures and Practical will be held in Room 134 Lecture Theatre and Room 237, Student Laboratory, University Pathology Building, Queen Mary Hospital, Pokfulam Road, Hong Kong respectively.

## Starting Date and Course Fee

The starting dates of the course series are as follows;

	Course codes	Course titles	Starting dates	No. of sessions	Fee
1.	AS 20-003-33 (21)	Basic Medical Microbiology Techniques	Sept. 19, 2002	6	\$2100
2.	AS 20-003-34 (21)	Antimicrobial agents and Antibiotic Sensitivity Test	Oct. 24, 2002	3	\$1400
3.	AS 20-003-35 (21)	Laboratory Investigation of Gram-positive Organisms	Nov. 14, 2002	3	\$1400
4.	AS 20-003-36 (21)	Laboratory Investigation of Neisseriaceae &	Nov. 28, 2002	3	\$1400

		Spirochaetaceae			
5.	AS 20-003-37 (21)	Laboratory Investigation of Mycobacteriaceae & Anaerobes	Dec. 12, 2002	3	\$1400
6.	AS 20-003-38 (21)	Laboratory Investigation of Enterobacteriaceae & other enteric pathogens	Jan. 9, 2003	4	\$1900
7.	AS 20-003-39 (21)	Laboratory Investigation of Pseudomonadaceae & other Miscellaneous organisms	Jan. 30, 2003	4	\$1900
8.	AS 20-003-40 (21)	Integrated Bacteriology Workshop (Enrolment is limited to 15)	April 10, 2003	8	\$3200

**Closing date for application :** One week before the starting date of the individual course.

### Financial Assistance

Applicants (HKID card holders) working in private laboratories with less than 50 employees are eligible to apply for the training grant from the Small and Medium Enterprises (SME) Training Fund. For enquires please contact the following:

#### SME Training Fund Unit

Address : 4/F, Trade and Industry Department Tower, 700 Nathan Road, Kowloon  
 Telephone no. : 23985126  
 Fax no. : 23960545  
 Email : stf\_enquiry@tid.gov.hk  
 Homepage : <http://www.smefund.tid.gov.hk>

### Application Procedure

Applicants should, before the closing date, send the completed standard application form together with the appropriate course fee to **Mr. Jason C.H. Lam (Course Coordinator) c/o Chan & Hou Medical Laboratory Limited, Room 906, 9/F Melbourne Plaza, 33, Queen's Road Central, Hong Kong.** Cheque should be crossed and made payable to "HKU-SPACE" (劃線支票抬頭請書名「香港大學專業進修學院」). For further enquiry about the course, please call Mr. Arnold S.Y. Foo 2855-4805 / Ms. Bonnie Ng, 2975-5697.

## **Appendix - Course Content**

### **Medical Microbiology Course Series**

#### **1. Basic Medical Microbiology Techniques (AS 20-003-33-21)**

This course aims to introduce students to the basic concepts of medical microbiology techniques that are required for working in a clinical microbiology laboratory. Topics covered include: bacterial morphology, chemical composition of bacteria, staining methods, isolation and identification techniques, principles and methods of sterilization and disinfection.

#### **2. Antimicrobial Agents and Antibiotic Sensitivity Test (AS 20-003-34-21)**

Students will be given the principle modes of action of different types of antimicrobial agents, the various types of antibiotic assay methods. This include disk diffusion assay (NCCLS), microbroth dilution method, agar dilution method, E-test,  $\beta$ -lactamase test, serum bactericidal titre and MRS & VRE screening methods.

#### **3. Laboratory Investigation of Gram-positive Organism (AS 20-003-35-21)**

The pathogenicity, the methods of isolation and identification of different types of gram-positive organisms will be discussed. Organisms covered include Group A & Group B Streptococci, Enterococcus species, Staphylococcus aureus and Staphylococcus saprophyticus, etc.

#### **4. Laboratory Investigation of Neisseriaceae and Spirochaetaceae (AS 20-003-36-21)**

The pathogenicity, the methods of isolation and identification of different species of Neisseriaceae and Spirochaetaceae, e.g. *N. gonorrhoeae*, *N. meningitidis* and *Bram. catarrhalis* will be dealt with. The methods for the preliminary identification of Spirochaetaceae, VDRL and FTA-ABS are also included.

#### **5. Laboratory Investigation of Mycobacteriaceae and Anaerobes (AS 20-003-37-21)**

This course covers the common features of the Mycobacteria genus with emphasis on the characteristics of different species, e.g. MTB, *M. fortuitum*, *M. chelonae*, etc. Results of molecular diagnosis of MTB by PCR will be demonstrated and explained. The methods for isolation and

identification of different classes of anaerobic organisms: Bacteroides, Peptostreptococcus and Clostridium, will also be demonstrated.

**6. Laboratory Investigation of Enterobacteriaceae and other enteric pathogens (AS 20-003-38-21)**

This course aims to introduce students to the methods for the isolation and identification of Enterobacteriaceae and other enteric pathogens from clinical specimens. Organisms discussed include EHEC, EPEC, Shigella, Salmonella, Yersinia, Vibrio (O1, non-O1 & O139) and Campylobacter.

**7. Laboratory Investigation of Pseudomonadaceae and other miscellaneous organisms (AS 20-003-39-21)**

In this course, the characteristics of the pathogenic Pseudomonas (pseudomallei and aeruginosa) and other miscellaneous organisms (Legionella, Bordetella, Acinetobacter and Stenotrophomonas) will be discussed and the methods for the isolation and identification of these organisms will also be introduced.

**8. Integrated Bacteriology Workshop (AS 20-003-40-21)**

A review on the methods for the isolation and identification of common pathogens from routine clinical specimens will be presented. Students are given mimicking clinical specimens with case histories and are asked to put up, isolate and identify the possible pathogens in these specimens under the supervision/guidance of experienced demonstrators/Medical Laboratory Technologists. Enrolment of this course is limited to 15 and priority will be given to those who have completed all courses of the Series.