



PACIFIC PARAMEDICAL TRAINING CENTRE

TRAINING COURSES 2015

Haematology and Blood Cell Morphology
2 March – 27 March 2015

Health and Safety and Infectious Diseases
13 April – 8 May 2015

Laboratory Quality Management Systems
25 May – 19 June 2015

Biochemistry
13 July – 7 August 2015

Microbiology
31 August – 25 September 2015

Phlebotomy
5 October – 23 October 2015

Blood Transfusion Science
2 November – 27 November 2015

For further information contact:

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PACIFIC PARAMEDICAL TRAINING CENTRE



Haematology and Blood Cell Morphology 2 March - 27 March 2015

Over the duration of four weeks, both a comprehensive theoretical component and a series of practical workshops are provided to students attending the course. This course provides students with guidelines for the objective microscopic evaluation of white cells, red cells and platelets in both health and disease. Students are introduced to the workings of the microscope in terms of correct operation, correct use of objectives, and essential maintenance. Students are taught the principles of Romanowsky staining, the preparation of stains and buffers, causes of inconsistent staining quality and the correct staining techniques used in the identification of malarial parasites. Students are introduced to the blood film in terms of sample quality, the effects of anticoagulants, the correct technique in blood film making, morphological artefacts, buffy coat preparations, and the correct storage of blood films. Students also learn extensively, the correlation of blood film findings with results obtained from manual and / or automated methods for red cell, white cell and platelet parameters. Morphological terminology with reference to origin and correct application is also discussed. The lineage of all blood cells is followed through systematically from the common stem cell through all stages of development. A comprehensive account of both normal Haematology and pathological Haematology is given over the 4 week teaching programme. The course is designed to give trainees confidence in the preparation, staining and examination of blood films, be able to differentiate the white cell count into both normal and abnormal populations and finally recognise and comment on with confidence, abnormal film findings in an extensive range of common blood cell disorders.

Lecturer: **Mr Philip Wakem** *MMLSc, Dip MLSc, NZCS, MNZIMLS*
PPTC Chief Executive Officer and Haematology Specialist

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Health and Safety and Infectious Diseases 13 April - 8 May 2015

a) Health and Safety Component:

Implementing a Laboratory Health and Safety programme, Hazard Identification, Risk Assessment, Laboratory Premises and Design, Biohazard waste and disposal of contaminated material; Personal Protection; Code of conduct; Staff Health and Medical surveillance; Administrative Procedures; Chemical and dangerous goods storage; Material Data Safety Sheets; Major Incident Response; Laboratory Emergency Planning; and Laboratory Biosecurity concepts.

b) Infectious Diseases Component:

Notifiable Diseases; Role of Public Health; Surveillance and monitoring disease outbreak; workforce occupational exposure; Communicable Diseases; What makes an epidemic; Vaccines available; Bacterial causes of Infectious Diseases: isolation procedures to identify and confirm major bacterial pathogens associated with Gastrointestinal Infections, Seafood poisoning and marine environments, Food and water contaminating organisms; Bacterial Agents of Pneumonia, Septicaemia and Meningitis; Agents of Sexually Transmitted Infections. Viral causes of Infectious Diseases: A selective summary of disease specific viruses such as gastrointestinal viruses; Respiratory Viruses; Parasites of Infectious Disease and Mycology Review

Lecturers: **Mr Philip Wakem** *MMLSc, Dip MLSc, NZCS, MNZIMLS*
PPTC Chief Executive Officer

Mr Russell Cole *DipMLS, NZCS, MNZIMLS*
PPTC Laboratory Quality Manager

Mr Navin Karan *BMLSc, MNZIMLS*
PPTC Programme Manager

PACIFIC PARAMEDICAL TRAINING CENTRE



Laboratory Quality Management Systems 25 May - 19 June 2015

Over the duration of four weeks, a comprehensive theoretical component and a series of practical workshops are provided to students attending the course. The content of the course are as follows: Overview of LQMS and associated guidelines; Laboratory manager and Quality manager Roles; Setting policies, aims and objectives, developing a quality statement, devising quality plan, quality performance indicators; the Organisational responsibility. A workshop practical based on organisation charts, role documents, title page, document formats, set up numbers etc. is carried out. Quality manual, structure and contents; contents of personnel, health & safety manuals; Standard operating procedures (SOP) essentials; Documentation control and preparation; Out takes, copies, draft SOP's, obsolete documents, worksheet versions; Record keeping, report presentation, archives is all covered. Worksheet practical in SOP creation, policy creation, staff training logs; Specimen management manual contents; Personnel (staff records), CPD training logs, induction records; Monitoring and evaluation; Job descriptions, orientation, skill listing is carried out. Structure of departmental manuals, Health & Safety SOP's; Incident and accident reporting complaints, compliments and surveys; Quality improvement projects, is discussed as well. IATA transport requirements; Procurement management, inventory; Specimen management and collection are covered. Group discussions in all of the above processes are carried out in terms of the document required. Auditing and review processes for LQMS and agenda for management review meetings are discussed.

Lecturer: **Mr Russell Cole** *DipMLS, NZCS, MNZIMLS*
PPTC Laboratory Quality Manager

PACIFIC PARAMEDICAL TRAINING CENTRE



Biochemistry 13 July - 7 August 2015

The course is taught over the duration of four weeks and includes the following topics: organisation of phlebotomy collection and laboratory reception; blood collection sets and vacutainer tubes and needle systems; IATA Regulations and packaging techniques for biological substances; basic equipment including pipettes, pH meters, waterbaths, centrifuges, balances; an overview of blood gas and other biochemistry analysers; an overview of Diabetes in terms of pathology diagnosis, laboratory management and point of care testing; renal function and renal dialysis; an overview of cardiac enzymes in health and disease focusing on Myocardial Infarction, diagnosis and laboratory management; advances in protein analysis and specialist biochemical analysis; an overview of thyroid function and associated abnormalities; a molecular approach to biochemical pathology; organisation and effective management of the Biochemistry laboratory; Quality Control, QLab, and External Quality Assessment in the Biochemistry laboratory; use of spread sheets, word processing in the Biochemistry laboratory. Discussion of quality systems, Standard Operating Procedures, stock control and its management, result processing, audit trails, reducing error and process improvement; and an overview of Laboratory Information Systems is also discussed. Staff competency/ personal records, quality manual essentials, documentation framework, auditing and quality review is also covered. This course does not incorporate practical workshops, but students are presented with a tour of both Wellington Hospital and Aotea Pathology laboratories.

**Lecturers: Specialist Medical Laboratory Scientists,
Wellington Hospital and Aotea Biochemistry Laboratories**

PACIFIC PARAMEDICAL TRAINING CENTRE



Microbiology 31 August - 25 September 2015

This course will provide trainees with an update on developments in microbiological procedures. The theoretical and practical aspects of current methods used in the isolation, identification and antimicrobial susceptibility testing of microorganism pathogens will be covered along with discussions on emerging and re-emerging bacterial organisms likely to cause infectious diseases. Specimen collection, transportation, and storage will be also discussed. Emergence of automation in Microbiology, in-house media production for bacterial isolation, and choosing the right resources and practical to carry out microbiological testing will be addressed. Serological and other rapid methods for the identification of bacterial and viral diseases including Hepatitis A, B, and C, HIV and other STIs, will be discussed. Also discussed will be the role of the microbiology laboratory in the surveillance of nosocomial infections and identification of infections of public health importance. Laboratory quality management issues, including running/managing quality controls will be included.

Lecturers: **Mr Navin Karan** *BMLSc, MNZIMLS*
PPTC Programme Manager and Microbiology Specialist

Mr Russell Cole *DipMLS, NZCS, MNZIMLS*
PPTC Laboratory Quality Manager and Microbiology Specialist

PACIFIC PARAMEDICAL TRAINING CENTRE



Phlebotomy 5 October – 23 October 2015

The PPTC is offering a three week training course on Phlebotomy. The course contents will address the following topics:

The role of a phlebotomist in the medical laboratory diagnostic process, Anatomy and Physiology of specific human tissue (This will take into consideration sites of blood collection, and overall discussion with the reference to the circulatory system and normal Haemostasis/Blood coagulation). Patient safety, and safety of procedure, The practise of Infection control, Adverse incidents with the application of first aid, The Laboratory and its sample collection policy with reference to the laboratory collection forms, Patient identification, Post collection requirements, Tests profiles and Test requirements, Medical abbreviations and medical terminology, Pre analytical variables such as patient status, Collection techniques, Sample storage and transportation, Blood collection (venous and Capillary), Patient assessment and preparation including considerations for both elderly patients and neonatal patients, Site preparation, Sample collection devices and equipment in terms of antiseptics, dressings, evacuated blood collection equipment's, needles and syringes, tourniquets and sample collection tubes, The Collection process and post collection process for both venous and capillary samples, Blood culture collection, Specialised collection procedures, collection and handling of non-blood specimens (Urines, faeces, sputum, saliva, swabs, mycological samples and seminal fluid, in terms of equipment, collection procedures, specimen stability, sterility, storage, transportation and handling. The handling and transportation of aspirates, Histology and Cytology samples, and specialised test procedures such as Bleeding time, Mantoux test and skin prick testing.

Lecturers: Philip Wakem, Russell Cole, Navin Karan
Senior Medical Laboratory Phlebotomists (Wellington Hospital)
Representatives from BD Company, Roche Diagnostics and Coulter-Beckman

PACIFIC PARAMEDICAL TRAINING CENTRE



Blood Transfusion Science **2 November – 27 November 2015**

The PPTC engages NZ Blood Service technical experts highly proficient in Transfusion Medicine to provide a four week lecture series covering transfusion transmitted diseases (including HIV, Syphilis, Hepatitis B and C), donor selection and collection, blood processing, blood transfusion practise, ABO, Rh and other blood group systems, blood group genetics and basic immunology, preparation of Coombs control cells, technical methods, antibody screen and identification, compatibility testing, haemolytic diseases of the newborn, transfusion reaction investigations, haemovigilance, blood bank quality management, equipment maintenance, organisation of a blood bank and the appropriate use of blood components in transfusion medicine. Practical sessions are also provided, focusing on correct technique and fundamental basic procedure. The content of this course ensures that the practical needs of all students attending are met. Practical sessions will focus on repeated basic methodology, so as techniques are mastered to levels of excellence.

**Lecturers: Specialist Medical Laboratory Scientists
New Zealand Blood Service (NZBS)**