

UNIVERSITY OF PAPUA NEW GUINEA

SCHOOL OF MEDICINE AND HEALTH SCIENCES

DIVISION OF CLINICAL SCIENCES

DISCIPLINE OF CHILD HEALTH

POSTGRADUATE PROGRAMMES 2011

DIPLOMA IN CHILD HEALTH (DCH)

MASTER OF MEDICINE IN CHILD HEALTH

MMed (Child Health)

## INDEX

	Page
Diploma in Child Health	3
Master of Medicine in Child Health	5
DCH and MMED (PART 2)	
Notes for syllabus	8
Syllabus	9
Booklist/Journals	16-18
MMED (PART 1)	
Course Structure	19
Assessment	19
Important Points to Note	20
Syllabus	21
Recommended Textbooks	23
MMed Part 1 Child Health Component Assignments	24
Postgraduate Training Online – Child Health, PMGH	26
Notes	27

# DIPLOMA IN CHILD HEALTH

## DCH

**COURSE SUPERVISOR** – Chairperson of Child Health Discipline

**CANDIDATES SUPERVISORS** – Fully registered Paediatricians at an approval hospital.

### **INTRODUCTION:**

The Diploma in Child Health Course is offered to Medical Postgraduates who wish to undertake further studies in Child Health. The Diploma in Child Health is awarded after satisfactory completion of one year's postgraduate study and practice of Child Health. Candidates work during the year as Paediatric Registrars under the direct supervision of a fully registered Paediatrician at an approval hospital to gain necessary clinical experience. They also attend a course of postgraduate study in Child Health conducted by the Hospital Paediatric Department that extends throughout the year and carry out a research project under supervision.

A candidate who satisfactorily completes the D.C.H. will have received sufficient further education and experience in Child Health to allow him or her to effectively support the general paediatric services for a province in Papua New Guinea as well as manage the usual paediatric problems. It is not intended as adequate training for a Specialist in Child Health.

The DCH is, however, a useful stepping-stone to more advanced paediatric training leading to recognition as a Specialist in Child Health. A candidate who obtains the DCH at a credit, or higher, level will be eligible to apply for exemption from one year of Part II of the MMed Degree Programme.

### **ENTRY REQUIREMENTS:**

Fully registered Medical Practitioners in Papua New Guinea with at least 1 years work as a fully registered Medical Practitioner.

### **PROGRAMME:**

- (i) Supervised work experience of a minimum of nine months in acute medical paediatrics, infectious diseases of children, surgical paediatrics, chronic diseases of children, rehabilitative paediatrics, neonatal paediatrics, nutrition, ambulatory paediatrics, community paediatrics and family planning.

- (ii) Formal teaching sessions throughout three trimesters on genetics, growth and development, nutrition, infectious diseases, epidemiology, neonatal paediatrics, surgical paediatrics, community and social paediatrics, maternal child health services and family planning. At least three formal teaching assistance sessions will be provided each week comprised of tutorials, seminars, case discussions, lectures, clinical presentations, clinical meetings, and unit audits and journal clubs.
- (iii) Self learning assignments by use of MCQ
- (iv) Write up of an investigation on a topic relevant to Child Health in Papua New Guinea. The topic is selected by the candidate in consultation with his/her supervisor and is carried out under supervision.

### **ASSESSMENT:**

- (i) Continuous assessment of the supervised work experience is carried out. Candidates must obtain a satisfactory performance in all areas of their supervised work experience to be eligible to sit the final examination for the DCH. A grade for the candidate's performance during the year forms part of the overall marking. The candidate's involvement in teaching activities and support for junior staff is assessed.  
  
A mid year assessment of the candidate's progress will be discussed with him or her, and will be forwarded to the SM&HS Postgraduate Committee.
- (ii) Write up of research project: Satisfactory completion of the candidate's project is required in order to be eligible to sit the final examination for the DCH. The project is marked.
- (iii) Final examination will consist of two written examinations, clinical examinations and an oral. Candidate must pass the written and the clinical sections and have at least a pass grade in the research project.

An external examiner will participate in the final examination.

## **MASTER OF MEDICINE IN CHILD HEALTH**

### **MMED (CHILD HEALTH)**

COURSE SUPERVISOR – Chairman of Child Health Discipline

CANDIDATES SUPERVISORS – Fully registered Paediatricians at approval hospitals.

INTRODUCTION: The Master of Medicine in Child Health is the Degree awarded by the University of Papua New Guinea to indicate that the candidate has satisfactorily completed the advanced training programme in Child Health. The possession of the MMed (Child Health) enables the candidate to be registered as a Specialist in Child Health by the Medical Board of Papua New Guinea, and to practice in this capacity.

The Master of Medicine Course is divided into two parts. In the first part of the course (MMed Part 1) emphasis is placed on upgrading the candidate's knowledge of the Basic Medical Sciences. In the second part of the Course (MMed Part 2) the emphasis is on clinical knowledge. In addition, candidates complete a supervised research project. Candidates work as registrars under the direct supervision of fully registered Paediatricians at approval Hospitals throughout the course, and satisfactory performance in clinical duties is an essential requisite for both parts.

The MMed Part 1 course is of one academic year's duration. The MMed Part 2 course is normally of four years duration. However, exemption from one year is usually given for candidates who have successfully obtained the Diploma of Child Health at a credit level or higher. Candidates are encouraged to spend one of the years in an approved overseas Paediatric Unit.

### ENTRY REQUIREMENTS:

The Course is offered to fully registered Medical Practitioners who have successfully passed the Diploma in Child Health Course at a Credit (or higher) level.

### PROGRAMME MMED PART 1:

Candidates who have obtained DCH at less than credit level may be allowed to enter the MMed Programme subject to having obtained further experience in Clinical Child Health practice, with recommendation from Supervisors and at the discretion of the Academic Staff and the Chief Paediatrician.

- (i) Supervised work experience of a minimum of 9 months in neonatal paediatrics, acute medical and surgical paediatrics, infectious diseases of children including tuberculosis and HIV infection, chronic diseases of children including paediatric malignant disease, rehabilitative paediatrics, nutrition, ambulatory paediatrics, community paediatrics and family planning.

- (ii) Directed learning throughout the year based on the two core components of the MMed Part 1 courses.
- a) Common Core Component. This component is common to all the clinical disciplines. The syllabus covers the Basic Medical Sciences – Anatomy, Physiology, Biochemistry, (including molecular genetics and cell biology) Pathology, and Pharmacology. This course component is coordinated through the Department of Clinical Sciences. Candidates are strongly encouraged to attend the two week revision course which is conducted in mid year at Port Moresby.
  - b) Child Health Core Component. This component is specific to Child Health. The Syllabus covers the Basic Medical Sciences as they are related specifically to the field of Child Health.
- Child Health Postgraduate tutorials at PMGH are held regularly on Thursday afternoons.
- (iii) Self-learning. Candidates will be expected to achieve most of the upgrading of knowledge on the Basic Medical Sciences through self learning aided by assignments

### ASSESSMENT OF PART 1 COURSE:

- (i) Continuous assessment of clinical work during the course. A grade for the candidate's performance forms part of the overall assessment. This assessment includes an assessment of the candidate's involvement in teaching activities and support for junior staff.
- (ii) Written assignments throughout the year. Written examinations in both the Common Core and Child Health Core Components.
- (iii) Candidates must pass the Clinical Assessment, complete the written assignments satisfactorily and pass the written examinations in each of the two core components before proceeding to MMed Part 2.

PROGRAMME MMED PART 2:

- (i) Supervised work experience of a minimum of 3 years after completion of Diploma of Child Health and MMed Part 1. Work experience to include neonatal paediatrics, acute medical and surgical paediatrics, infectious diseases of children including tuberculosis HIV infection chronic disease, rehabilitative paediatrics, nutrition, ambulatory paediatrics, community paediatrics and family planning.
- (ii) Formal Teaching Sessions. These teaching sessions, organized by the Paediatric Departments of the Approved Hospitals will take the form of tutorials or seminars, case presentations, lectures, clinical meetings, unit audits and journal clubs. Topics for tutorials will include basic epidemiology and research project design, data management and statistical analysis. A minimum of three teaching sessions per week should be attended.
- (iii) Self-learning assignments – by use of MCQ self assessment and teaching around Clinical topics from the Postgraduate Child Health Syllabus.
- (iv) Write up of a research project on a topic relevant to Child Health in Papua New Guinea. The topics is selected by the candidate in consultation with his/her supervisor, and carried out under supervision.

ASSESSMENT:

- (i) Continuous assessments of supervised work experience

Candidates must obtain a satisfactory grading for all areas of their performance as registrars at the end of each year in order to progress and to be eligible to sit for the written and clinical examination at the end of the course. Grading for Clinical Performance forms part of the overall marking. Assessment of the candidates involvement in teaching and support of junior staff is included.

A mid year assessment of the candidate's progress will be discussed with him/her, and will be forwarded to the SM&HS Postgraduate Committee.

- (ii) Write up of research project. Satisfactory completion of the research project is required in order for the candidate to sit the written and clinical examinations. The project is presented at the Annual Meeting of the Postgraduate Society and the final written version must be submitted to the Professor of Child Health at least 2 weeks prior to the date of the Part 2 examinations.

The Project is assessed by the External Examiner and a grading of at least a pass level is required.

- (iii) Final Examination consisting of two written papers, clinical assessments and an oral.

An external examiner will participate in the final examinations.

Candidates must pass the written and the clinical components of the examinations, and obtain at least a pass for their research project.

## NOTES FOR POSTGRADUATE SYLLABUS IN CHILD HEALTH – DCH AND MMed PART (2)

Whilst the Syllabus is the same for both the DCH and the MMed Part 2, the level of Knowledge expected is considerably higher in candidates sitting for the MMed Part 2. Whilst the DCH candidate will be expected to have a good working knowledge of the topics to enable him/her to deal with the common conditions seen in everyday Paediatric Practice, the MMed Part 2 candidate is expected to have an in depth knowledge across the whole syllabus. This knowledge, which will include up to date information of the Basic Sciences background to the various topics will enable him or her to deal not only with the common problems but also to recognize and form a rational management plan for the children presenting with the less common problems. It will also provide the basis on which the Specialist Paediatrician will run a Paediatric Service, which will include teaching at various levels.

It is expected that both as part of training, and for the benefit of his/her own knowledge base and Clinical skills, candidates will involve themselves in teaching undergraduate students and nurses.



DIPLOMA IN CHILD HEALTH (DCH)

&

MASTER OF MEDICINE IN CHILD HEALTH (MMED)

SYLLABUS

GENETICS

Gene structure, expression and control

Chromosomal anomalies – numerical  
- structural

Inheritance - single gene  
-multifactorial  
-mitochondrial

Prenatal Diagnosis

Screening for genetic disease

GROWTH AND DEVELOPMENT

Embryogenesis

Intrauterine growth

Postnatal growth and development

Effects of environment and heredity

Nutrition and growth

COMMUNITY CHILD HEALTH

Maternal and Child Health Statistics

Maternal and Child Health Services

Immunisation Programmes – Present and Future

School Health Services

Family Planning Methods and Services

Dental Health Services

Accidents and Accident Prevention

Drug Abuse

Children with Handicap – community services

Child Welfare Services

NEONATAL PAEDIATRICS

Relationship between Maternal and Neonatal health

Birth Asphyxia and its prevention

Resuscitation of Neonates

Principals of Care of the Newborn

Normal variants and minor neonatal problems

Importance of Breast Feeding

Low Birth Weight – Definitions – Low Birth Weight

-Pre term

-Small for Dates

-Principles of Care

-Specific Problems and management

Respiratory Problems

Neonatal Jaundice

Neonatal Infection -prenatal, intrauterine

-acquired at delivery

-postnatal

Common Congenital Abnormalities and their management

NUTRITION, NUTRITIONAL DISORDERS AND FLUID BALANCE

Nutrition requirements from birth to adult

The importance of Breast Feeding

Nutritional and Anthropometrical Assessment

Malnutrition – Under nutrition – Marasmus

-Kwashiorkor

-Marasmic Kwashiorkor

-Vitamin Deficiencies

-WHO guidelines for the management of the child with severe malnutrition

-Over nutrition – effects on adult disease

Fluid Balance from neonate to adult

PAEDIATRIC INFECTIOUS DISEASE

Bacterial Meningitis

Measles

Typhoid

Tuberculosis

Tetanus, including neonatal tetanus

Malaria

Pertussis

Poliomyelitis

Diphtheria

Hepatitis

Rubella  
Intrauterine Infectious  
Varicella Zoster  
Mumps  
Encephalitis  
HIV infectious  
Others

### RESPIRATORY DISEASES

Pneumonia  
Bronchiolitis  
Laryngotracheobronchitis  
Epiglottitis  
Asthma  
Chronic Lung Disease – Bronchiectasis  
  -Cystic Fibrosis  
Upper Airways Obstruction and its management  
Respiratory Failure – indicating for Assisted Ventilation

### CARDIOVASCULAR DISEASE

Congenital Heart Disease  
Acquired Heart Disease – Rheumatic fever and Rheumatic Heart Disease  
  -Myocarditis/Caridomyopathy  
Heart Failure – Aetiology, Diagnosis and Management  
Hypertension in Children

GASTROINTESTINAL DISEASES

Diarrhoeal Disease – Acute  
     -Dysentery  
     -Persistent  
 Oral Rehydration -Theory and Practice  
 Helminthic Infections  
 Malabsorption Syndromes  
 Appendicitis  
 Intussusception  
 Hirshsprung's Disease  
 Portal Hypertension and Oesophageal Varices

DISEASES AND DISORDERS OF THE RENAL/URINARY SYSTEM

Congenital abnormalities of the Urinary System  
 Urinary Infection  
 Haemolytic uraemic Syndrome  
 Glomerulonephritis – Nephritic Syndrome  
     -Nephrotic Syndrome  
     -IgA nephropathy  
 Acute Renal Failure and it's Management  
 Renal/Urinary stones

PAEDIATRIC ENDOCRINOLOGY AND METABOLIC DISEASE

Thyroid - Hypothyroidism  
     -Hyperthyroidism  
 Calcium Metabolism and its disorders  
 Puberty – Normal  
     -Precocious  
     -Delayed  
 Ambiguous Genitalia and abnormalities of Sexual Differentiation  
 Cryptorchidism  
 Adrenal Disorders in Childhood  
 Diabetes  
 The Commoner Inborn Errors of Metabolism  
 Hypoglycaemia

SOCIAL PAEDIATRICS, DISORDERS OF THE FAMILY AND PAEDIATRIC PSYCHIATRY

Child Abuse

Behavioural Disorders - recurrent abdominal pain  
 -cyclical vomiting  
 -eneuresis  
 -encopresis  
 -others

Conversion Reaction -Hysteria

Anorexia nervosa

Autism Spectrum

Attention Deficit Disorder and Hyperactivity

PAEDIATRIC HAEMATOLOGY

Anaemia

Bleeding Disorders – Von Williebrand’s Disease  
 -Idipathic thrombocytopenic Purpura  
 -Henoch Schonlein Purpura  
 -Others

Coagulation Disorders - Inherited – Factor 8 Deficiency  
 -Factor 9 Deficiency  
 -Factor 13 Deficiency  
 -Acquired Disseminated Intravascular Coagulation

PAEDIATRIC MALIGNANT DISEASE

Leukaemia

Lymphoma - Hodgkins  
 -Non Hodgkins – Burkitts  
 -Other

Nephroblastoma

Neuroblastoma

Retinoblastoma

Tumours of the Liver

Tumours of the Central Nervous System

Germ Cell Tumours

Ewings Sarcoma

Rhabdomyosarcoma

Others

Palliation and Care of the Dying Child and the family

DISORDERS OF THE CENTRAL NERVOUS SYSTEM

Seizure Disorders – Febrile Convulsions  
-Epilepsy in Childhood  
Polyneuropathy – Guillian Barre Syndrome  
Cerebral palsy  
Speech Disorders  
Learning Disorders  
Attention Deficit Disorders  
CNS Degenerative Diseases in Childhood  
Congenital Abnormalities of the Brain and Spinal Cord  
Neural Tube Defects  
Hydrocephalus  
Others

PAEDIATRIC OPHTHALMOLOGY

Common Problems in Children - the red eye  
- conjunctivitis  
- corneal ulcer  
- eye injury  
- Strabismus  
- Cataract  
Visual Impairment and services for the visually impaired

PAEDIATRIC OTORHINOLARYNGOLOGY

Common problems in children – acute otitis media  
Chronic Secretary otitis media  
Chronic Suppurative otitis media  
Mastoiditis  
Cholesteatoma

Deafness and services for the deaf

PAEDIATRIC DERMATOLOGY

Inherited disorder of the skin  
Birthmarks  
Common Skin Infections  
Infantile and Seborrheic Eczema  
Atopic Disease  
Other Skin problems of Childhood

PAEDIATRIC IMMUNOLOGY

- Congenital disorders – Di George Syndrome
- Dysgammaglobulinaemia
  - Agammaglobulinaemia
  - Severe Combined Immunodeficiency
  - Wiskott Aldridge Syndrome
  - Ataxia Telangiectasia
  - Others
- Acquired                      HIV infection

AMBULATORY PAEDIATRICS

- Organisation of Paediatric Outpatient Services  
Shock and its Management in Children  
Management of Trauma in Children  
Management of Burns  
Paediatric Resuscitation  
Management of common accidents – poison ingestion
- animal bites/stings
  - snake bite
  - near drowning
  - lime burns
  - others

EVIDENCE BASED MEDICINE, MEDICAL RESEARCH, BASIC EPIDEMIOLOGY AND MEDICAL STATISTICS

- INCLUDING    - Research Study Type and Design  
                  -Basic Statistical Tests

**BOOKLIST FOR POSTGRADUATES IN CHILD HEALTH (DCH & MMED PART 2)**

ROBINSON PRACTICAL PAEDIATRICS, 5<sup>TH</sup> EDITION CHURCHILL LIVINGSTONE 2003  
OR

LISSAUER AND CLAYDEN ILLUSTRATED TEXTBOOK OF PAEDIATRICS, 3<sup>RD</sup> EDITION MOSBY 2007

STANDFIELD DISEASE OF CHILDREN IN THE SUBTROPICS AND TROPICS, 4<sup>TH</sup> EDITION EDWARD  
ARNOLD 1991

RENNIE AND ROBERTON A MANUAL OF NEONATAL INTENSIVE CARE, 4<sup>TH</sup> EDITION EDWARD  
ARNOLD 2002

JOHNSON THE NEWBORN CHILD, 8<sup>TH</sup> EDITION CHURCHILL LIVINGSTONE 1998

ILLINGWORTH COMMON SYMPTOMS OF DISEASE IN CHILDREN

CROFTON HORNE AND MILLER CLINICAL TUBERCULOSIS, 2<sup>ND</sup> EDITION MACMILLAN (THROUGH  
TALC)

CONNOR AND FERGUSON SMITH, ESSENTIAL MEDICAL GENETICS, 6<sup>TH</sup> EDITION BLACKWELL OR

JORDE CAREY, BAMSHAD, WHITE MEDICAL GENETICS, 3<sup>RD</sup> EDITION, MOSBY 2003

SHANN, BIDDULPH, VINCE, PAEDIATRICS FOR DOCTORS IN PNG, 2<sup>ND</sup> EDITION 2003

HOSPITAL CARE FOR CHILDREN. Guidelines for the Management of Common Illnesses with limited  
resources, WHO, 2006. This Book is free of charge from WHO.

GILLET THE HEALTH OF WOMEN IN PAPUA NEW GUINEA PNG IMR 1990

TANNER FOETUS INTO MAN 2<sup>ND</sup> EDITION, CASTLEMEAD

SWINGSOW STATISTICS AT SQUARE ONE, BRITISH MEDICAL JOURNAL, PUBN

COGGAN EPIDEMIOLOGY FOR THE UNINITIATED 3<sup>RD</sup> EDITION BRITISH MEDICAL JOURNAL PUBN  
OR

DARKER PRACTICAL EPIDEMIOLOGY LATEST EDITION CHURCHILL  
OR

BASIC EPIDEMIOLOGY 2<sup>ND</sup> EDITION WHO BONITA, BEAGLEHOLE AND RJELLSTROM (AVAILABLE  
FREE FROM WHO)  
OR



ADVANCED PAEDIATRIC LIFE SUPPORT  
BRITISH MEDICAL JOURNAL PUBN  
4<sup>TH</sup> EDITION 2004

KINGSTON ABC OF MEDICAL GENETICS 3<sup>RD</sup> EDITION (REVISED)  
BMJ PUBLICATIONS 2002

- THESE BOOKS ARE ESSENTIAL FOR THE CANDIDATES

REFERENCE TEXTS:

RUDOLPH'S PAEDIATRICS 20<sup>TH</sup> EDITION  
APPLETON AND LANGE  
OR

NELSONS TEXTBOOK OF PAEDIATRICS. 17<sup>TH</sup> EDITION

ISAACS + MOXON. A PRACTICAL APPROACH TO PAEDIATRIC  
INFECTIONS 1996 CHURCHILL LIVINGSTON3

TROPICAL CHILD HEALTH CLASSICS

MORLEY PAEDIATRICS PRIORITIES IN THE DEVELOPING WORLD

JELLIFFE AND JELLIFFE HUMAN MILK IN THE MODERN WORLD

WALLANCE AND EBRAHIM MATERNAL AND CHILD HEALTH AROUND THE WORLD

UNICEF STATE OF THE WORLDS CHILDREN 1993 – 2010

JOURNALS:

1. Paediatric and General Journals  
Clinical Paediatrics  
Paediatric Clinics of North America  
Journal of Tropical Paediatrics  
Annals of Tropical Paediatrics  
Paediatric Infectious Disease Journal  
Archives of Diseases in Childhood  
Lancet  
New England Journal of Medicine  
Journal of Paediatrics and Child Health  
British Medical Journal

2. Review Journals  
Current opinion in Paediatrics  
Current Paediatric Practice

#### ACCESS TO JOURNALS ONLINE

Many Journals can be assessed online through HINARI (Health International Access to Research Initiative).

You can obtain information on how to enter HINARI through the Medical Librarian who will provide you with a User ID and password.

#### ACCESS TO EDUCATIONAL MATERIAL ONLINE

The WHO website has a large selection of helpful material on a wide range of topics.

There are several other sites available and more will undoubtedly become available

## NOTES FOR CANDIDATES IN MMED PART 1 CHILD HEALTH

### COURSE STRUCTURE:

The course consists of two components. The first is the Common Core and is for candidates in all disciplines. The course is basically self learning. During the year guidance will be given in the form of “reading packages” distributed by the course coordinator. These will be an intensive revision block followed by a mock examination. The syllabus is comprehensive and basically an updating course in the Basic Medical Sciences. The Examination will cover the whole syllabus. Formal study time is one afternoon per week.

The second component of the MMed Part 1 course is the Specialty Core Course. This course is specific to each specialty. The syllabus for the Child Health Course is enclosed. Seminars on various topics will be held in Port Moresby on Monday or Thursdays. The seminar programme will provide a guideline for candidate and their supervisors studying for the course from outside of Port Moresby. Formal study time is one afternoon per week (Monday or Thursday in Port Moresby). In Child Health candidates are expected to complete 12 assignments throughout the year. These assignments which will be marked, are designed to help study, and will help in the preparation of seminars. They should be completed and handed in or sent to Professor Nakapi Tefuarani by the date shown on the assignment sheet. The assignment marks form part of the final Part 1 assessment.

The examination for the Child Health Core Course will cover the whole syllabus.

### ASSESSMENT OF THE MMED PART 1 COURSE

#### 1. CLINICAL COMPONENT

This is the candidate’s performance as a registrar throughout the year. It includes assessment of:

- Clinical diagnosis and management
- Reliability
- Punctuality
- Availability
- Supervision of Junior Staff
- Teaching of undergraduate students and nurses
- Work attitude and relationship with other staff

A satisfactory assessment is necessary. A candidate cannot pass the MMed Course without a satisfactory assessment of this Clinical Component.

## 2. COMMON CORE COMPONENT

This component will be examined by written examination at the end of the year. A pass in this component is necessary to pass the whole course.

## 3. CHILD HEALTH CORE COMPONENT

This component will be assessed by means of the assignments, and by a written examination at the end of the year. A pass in this component is necessary to pass the whole course.

### IMPORTANT POINTS TO NOTE

The MMed Course is not a “walkover”. It is a tough course and passing it requires a considerable amount of hard work.

It is virtually impossible to pass the exam by starting to study in the second half of the year – there is simply far too much to get through.

A steady effort throughout the year will almost certainly result in success.

Allocate a certain number of hours of study per week of your free time – and stick to this. Six to eight hours a week – in addition to the study afternoons – would probably be a minimum required for most people.

Attend Clinical Meetings and Lectures – and take notes of the updates in Basic Medical Sciences that they provide.

Read around the clinical cases you have. Never prescribe a drug, or put up intravenous fluids without knowing what you are giving, and why you are giving it.

Use the Self Assessment questions in Physiology and Pharmacology provided. Work through the questions steadily.

The Assignments are to help you in your study. Make sure you get them completed and handed in, in time.

Make the best use of your time. (eg. Don't go to the bank on a pay Thursday or Friday if you can avoid it).

MASTER OF MEDICINE PART ONE

CHILD HEALTH COURSE COMPONENT SYLLABUS

GROWTH AND DEVELOPMENT

Intrauterine growth

Length

Weight

Brain and head circumference

Post natal growth

Weight

Height

Growth velocity

Effects of heredity and environment

Neurological development and factors affecting it

EMBRYOLOGY

Maxillo facial region

Hypothalamus/pituitary

Brain and spinal cord

Urogenital system

Heart

Lungs

Gastro intestinal tract

GENETICS

Cell division, meiosis and mitosis

Karyotypes normal and abnormal

Genes, Structure, function and control

Recombinant DNA and its application

Polymerase chain reaction

Teratogenesis and congenital abnormalities

Prenatal diagnosis. Techniques and indications

Screening for genetically determined disease

Genetics of cancer

PHYSIOLOGY OF THE FOETUS, NEONATE AND CHILD

Lung  
 Cardiovascular system  
 Renal system  
 Gastrointestinal tract  
 Endocrine system  
 Hypothalamo pituitary endorgan axis  
 Thyroid  
 Adrenal  
 Reproductive – puberty  
 Parathyroid and calcium metabolism  
 Placental function  
 CSF Secretion and function

Coagulation + Haemostasis  
 Fluid and electrolyte balance

BIOCHEMISTRY

Metabolic pathways and the more common errors  
 Neonatal bilirubin metabolism  
 Surfactant  
 Glucose haemostasis

PHARMACOLOGY

Pharmacokinetics in the neonate and child

IMMUNOLOGY

Development of the immunological system  
 Abnormalities of the immunological system  
 Theoretical basis of immunization

APPLIED ANATOMY

Brain and spinal cord – motor and sensory tracts  
 CSF circulation and problems  
 Genito urinary system            }  
 Cardio vascular system            }            in neonates and children  
 Gastrointestinal system         }  
 Respiratory system

EVIDENCE BASED MEDICINE, MEDICAL RESEARCH, BASIC EPIDEMIOLOGY AND STATISTICS

Including – Research Study Type and Design  
-Basic Statistical Tests





MMED PART 1 CHILD HEALTH COMPONENTASSIGNMENTS

1. Discuss the current understanding of gene structure, organization and control. What is the genetic basis of Beta Thalassaemia. By February 23<sup>rd</sup> (JV)
2. What are cell membrane receptors? Discuss the biochemical and other pathways by which the cell responds to external stimuli. Give some examples of clinical conditions caused by a disturbance of normal receptor mechanisms. By March 9<sup>th</sup> (JV)
3. Discuss the normal physiology of the knee jerk reflex, and discuss the pathophysiology of cerebral palsy. By March 30<sup>th</sup> (NT)
4. a) Discuss the embryological development of the internal and external sexual structures, and the factors controlling this development.  
  
b). Discuss the physiology of puberty and discuss the classification of disorders of puberty. By April 20<sup>th</sup> (WP).
5. Discuss the pathophysiology of asthma. Discuss the rationale for the current treatment of asthma in children. By May 11<sup>th</sup> (WP)
6. a) Discuss the physiology basis of signs and symptoms observed in an 18 months old with a large VSD admitted with heart failure. Discuss the drugs used in the management of heart failure.  
  
b) Provide a diagram indicating the actions of drugs used in hypertension. By June 1<sup>st</sup> (NT)
7. Discuss the adjustments which occur in the Kidney:
  - a) During dehydration caused diarrhea
  - b) After eating a very salty meal
 Discuss the role of the kidney in
  - a) control of blood pressure
  - b) acid base haemostasis
 By June 22<sup>nd</sup> (NT)
8. Discuss the pathophysiology of respiratory failure  
  
Give a brief classification of different types of hypoxia. Discuss the oxygen haemoglobin desaturation curve. Discuss the pulse oximeter and the use of pulse oximetry in clinical conditions such as pneumonia. By July 12<sup>th</sup> (JV)
9. Discuss the intestinal absorption of carbohydrate, fat, protein, sodium, water, and iron. Briefly outline the rationale of Oral Dehydration Therapy. By August 2<sup>nd</sup> (WP)

10. What are the components of the immune system? Discuss the processes which take place after a vaccine is given to a child, in the production of an immune response.

What is the graft versus host disease?

Give a classification of the immunological disorders of childhood? By August 3<sup>rd</sup> (WP)

11. What do you understand by the term oncogene. Discuss the role of oncogenes and tumour suppressor genes in Paediatric cancer. By Sept 13<sup>th</sup> (JV)
12. Give a reasoned account of your approach to the diagnosis and management of a child with bleeding disorder. By October 24<sup>th</sup> (NT)

### NOTES:

These assignments are part of the Part 1 course – and they will be marked. You must complete them and make every effort to hand them in by the dates given. They should help you with preparing for the Seminars.

The assignments should be in your own words. Copying large chunks of textbooks:

- Is an extremely inefficient way of learning
- If not adequately acknowledged is plagiarism

You will get much more out of the mid year revision course if you have done the first 7-8 assignments than if you have not.

Assignments not received within 4 weeks of the due date may not be marked – and this will adversely affect your course result.

POSTGRADUATE TRAINING OUTLINE – CHILD HEALTH, PMGH1. FORMALMonday

1300 - 1500

DCH/MMED COMMUNITY AND CLINICAL CHILD HEALTH TUTORIALS

Tuesday

1100 - 1200hrs UNIT CLINICAL CASE PRESENTATION

1600 - 1700hrs HOSPITAL/SCHOOL GRAND ROUND

Wednesday1200 - 1300hrs PROGRESS ON RESEARCH TOPICS  
(1<sup>ST</sup> WEDNESDAY OF MONTH)Thursday

1300 - 1500hrs BASIC MEDICAL SCIENCE IN CHILD HEALTH TUTORIALS

Friday

1200 - 1300hrs JOURNAL CLUB

1400 - 1600hrs SHORT/LONG CASES (AS ARRANGED)

## NOTES

### 1. GENERAL:

You need to organize your clinical commitments to enable you to attend the teaching sessions. However, clinical emergencies always take priority. All registrars will be expected to help with clinical teaching for medical students.

You are expected to attend and participate in Journal Club presentations. We suggest you bring lunch.

There is a very tight schedule of clinical work and teaching. The schedule is equally – if not more – tight for those leading the sessions. **PLEASE BE PUNCTUAL.**

Attendance at the Tuesday clinical meetings – both morning Paediatric and afternoon Hospital/Faculty should be a regular part of the week's routine. Throughout the year a large amount of ground is covered – and the meetings provide a very good update on various topics.

### 2. INFORMAL

Learn from your patients. Read around the clinical problems that they present. Make absolutely sure that before you give any drugs, you know what it does and what problems it is associated with, and that when you give intravenous fluids you understand why you are giving that particular fluid, and what the child's requirements are. Make absolutely sure you fully understand the standard treatment regimes.

### 3. TEACHING OF UNDERGRADUATES

Registrars are expected to teach undergraduate and nursing students and residents. This is part of the training programme. It gives the candidates an opportunity to critically assess their own history taking and clinical examinations skills. It also gives them experience in teaching – a skill they will require at Specialist level.