



July 2022

REGULATIONS

FOR ADMISSION TO THE FELLOWSHIP OF THE COLLEGE OF

PUBLIC HEALTH MEDICINE OF SOUTH AFRICA

FCPHM(SA)

INSTITUTION	The Colleges of Medicine of South Africa
DIVISION	The College of Public Health Medicine of South Africa
QUALIFICATION TITLE	Fellow of the College of Public Health Medicine of South Africa
OFFICIAL DESIGNATION	FCPHM(SA)
FIELD	09 (Health Sciences and Social Services)
SUB-FIELD	Preventive, promotive, curative and rehabilitative
NQF FIELD	9
1.0 COMPONENTS	A final exit examination
PRIOR LEARNING	
1.1 FOR ADMISSION TO THE PROGRAMME LEADING TO THE QUALIFICATION	A medical qualification registered with the Health Professions Council of South Africa.
2.0 PURPOSE OF ASSESSMENT	The assessment of this qualification forms part of the credentialing process for medical practitioners, as specialists in Public Health Medicine. The Health Professions Council of South Africa (HPCSA) stipulates training requirements, including a minimum period of experiential learning. Candidates usually sit for the examination prior to the completion of the required period of supervised learning specified by the HPCSA. The aim of assessment for this qualification is to meet the need for formal examination certification, as well as to set standards, nationally, for such a qualification.
3.0 ADMISSION TO THE EXAMINATION	(read in conjunction with the Instructions for Admission to CMSA Examinations) <i>Website link</i>
3.1	A candidate may be admitted to the Final examination having: <i>(criteria to be satisfied in the order shown below, successful completion of each step being a pre-requisite for the next step)</i>

- 3.2 Certification, by head of the candidate's training department, that:
- a) The candidate will have completed at least 3 calendar years as a registered student for the MMed (Public Health Medicine) or the MMed (Community Health) or an equivalent degree at his/her University on the date of the first written paper, and has held a post recognised by the Health Professions Council of South Africa for the training of a specialist in Public Health Medicine for at least three calendar years
 - b) The candidate has mastered at least 75% of the "skills" listed in Appendix A, Section 3, of the Regulations for Admission to the Fellowship of the College of Public Health Medicine of South Africa, as amended up to 6 months prior to the date of the first written paper
 - c) For candidates who have been registered for the MMed (Public Health Medicine) or an equivalent MMed degree at a South African University, the candidate has successfully completed and submitted the dissertation for the MMed degree, and that the dissertation has been examined by at least two examiners, and the dissertation has been passed and confirmation of passing the dissertation is available before admission to the examination.
- 3.3 Submission to the CMSA, by the candidate, at the time of applying, of the following:
- a) Electronic copies of the following clearly listed with the surname and initial of candidate and the name of document identifying what the document is:
 - 3.2.1 The certification by the Head of department (The electronic copy should be titled "Certification by HOD")

The certification by the Head of Department should include confirmation that

 - (a) the candidate has completed three calendar years of training in a post recognised for Public Health Medicine training;
 - (b) the candidate has mastered more than 75% of curriculum skills;
 - (c) the candidate has passed their M Med dissertation;
 - (d) the title of the M Med dissertation.
 - (e) the proposed field/topic for the two objective structured practical examination (OSPE) stations on candidate's chosen topic.
 - (f) the title of the short report (where applicable, the HoD certification should also confirm why ethics approval for the short report was not necessary).
 - 3.2.2 One copy of a short report (3000 to 5000 words) on an appropriate public health topic (see the Guidelines) (The electronic copy should be titled "Short report").
 - 3.2.3 A 350 word abstract of the MMed dissertation submitted to the University for assessment (The electronic copy should be titled "Abstract of MMed dissertation").
 - 3.2.4 An official transcript or equivalent letter from the training institution's postgraduate office confirming the candidate has passed their dissertation.
 - 3.2.5 One copy of the Portfolio of Learning including six monthly institutional formative assessment reports (see Appendix 1) (The electronic copy should be title "Portfolio of Learning"). The Portfolio must satisfy the Competence Assessment Panel of the College of Public Health Medicine that the candidate has covered the broad spectrum of skills required in the curriculum. Candidates may in future be required to manage their portfolio online.
 - 3.2.6. The topic for the two OSPE stations on the candidate's chosen topic must be acceptable to the convenor of the examination after consultation with the core examiners. The examiners may require the candidate to change, refine or amend the topic. The candidate must be informed of any change, as must the examiners of the final topic or field, in writing at least 1 month prior to the oral examination
- 3.4 The candidate's eligibility to write the examination lapses after four years following leaving a training programme (ie after leaving a post accredited by the HPCSA for training in Public Health Medicine).

4.0 FORMAT OF THE EXAMINATION

- 4.1 Writing of four written papers by the candidate, namely:
- a) Two short answer question papers of three (3) hours duration each. The candidate will be required to answer all 10 out of 10 questions in each paper.
 - b) Two multiple choice papers of three (3) hours duration each. Each paper will consist of 75 single best answer type questions.

Each paper will then carry equal weight in contributing to the candidate's marks.

- 4.2 Attendance, by candidates who have passed their written examinations (average mark for the four papers of $\geq 50\%$), at an objective structured practical examination (OSPE). The OSPE will consist of eight stations lasting 10 minutes each and each preceded by 10 minutes of preparation time. The eight stations will comprise one station on the candidate's portfolio, two stations on the topic/field of the candidate's choice, and five stations that will consist of general tasks/questions that may cover the entire syllabus. There will be 2 examiners at each OSPE station.
- 4.3 A candidate will be awarded the Fellowship if (a) average mark for the four written papers is 50% or higher and (b) the overall mark is 50% or higher. The final overall mark will be a weighted average of the component marks calculated as follows:

Short report	20/100
Short answer papers (10/100 each)	20/100
Multiple choice papers (10/100 each)	20/100
OSPE	40/100

- 4.4 Where a candidate fails to achieve an overall mark of 50% for the examination, the examiners may recommend that the candidate be exempted from repeating one or more of the following sections in future attempts, provided that they have been passed at the current attempt and that the candidate wishes this; and that the candidate attempts the examination at the next available opportunity:
- The short report
 - The 4 written papers
 - The OSPE

In such cases the marks for the exempted sections must be carried forward to the next attempt, and a distinction may not be awarded at that attempt.

- 4.5 If the candidate is still unsuccessful (ie aggregate mark is still $< 50\%$) then the entire examination must be re-taken at the following attempt

5.0 EXIT LEVEL OUTCOMES

5.1 Health risks and health status: Overall learning outcomes

Be able to describe, explain, quantify and prioritise health risks facing individuals, communities and society, at home, at work, at leisure and in transit

Assessment criteria

- Be able to diagnose cases of preventable diseases, in order to make an insightful community diagnosis
- Be able to describe the aetiology and epidemiology of commonly occurring health-related conditions
- Be able to carry out a rapid epidemiological assessment, including the investigation of a disease outbreak
- Be able to design, implement, and report on the results of an epidemiological study
- Be able to describe the burden of a disease or group of diseases, in economic and medical terms: for the individual, for the community, and for society
- Be able to formulate and prioritise appropriate public health research questions
- Be able to interpret one's own data, as well as the commonly occurring data and findings of other investigators, including publications in the scientific literature
- Be able to motivate for adequate funding and resources required to carry out these activities
- Be able to design and manage surveillance systems

5.2 Health and health service needs: Overall learning outcomes

Be able to explain, quantify and prioritise the health and health service needs of individuals, communities and society: at home, at work, at leisure and in transit

Assessment criteria

As for 5.1 but in addition:

- Be able to apply different approaches to assessing health service need;
- Be able to plan and conduct a study of Burden of Disease;
- Be able to distinguish between impairment and disability
- Be able to characterise the specific health and social needs of vulnerable groups.

5.3 Evaluation of health systems and services: Overall learning outcomes

Be able to explain, quantify and analyse the nature, pattern and quality of health services provided for, and demanded by, individuals, communities and society, including recommendations for an appropriate, acceptable and affordable level of service provision that is effective, efficient and equitable

Assessment criteria

As for 5.1 but in addition:

- Be able to describe health services provision in terms of inputs, processes, outputs and outcomes
- Be able to describe the nature and patterns of service provision and utilisation in terms of efficacy, efficiency, equity, acceptability, accessibility, and appropriateness (with respect to needs and affordability)
- Be able to evaluate a health system

5.4 Design and implementation of interventions: Overall learning outcomes

Be able to design and implement quality assured, effective, efficient, equitable, affordable and acceptable interventions to reduce, eliminate, or ameliorate the health risks faced by individuals and communities at work, at home, at leisure and in transit

Assessment criteria

- Be familiar with the investigation of, and treatment for, uncomplicated commonly occurring health related conditions, of public health importance, in order to be able to achieve the overall learning outcome with greater insight
- Be able to lead, communicate, advocate, plan and manage for a health promoting intervention at all levels of societal organisation
- Be able to design, conduct and report on an intervention study
- Be able to evaluate the processes and the results of health promoting interventions, and to modify the processes accordingly as required

5.5 Health systems leadership and management: Overall learning outcomes

Understand and apply leadership and management principles and practices at all levels within the health system. Assessment criteria

- Be able to lead strategic, business and operational planning within the health system;
- Be able to assume an enabling, advocating and mediating role in a multidisciplinary environment, to effect changes in culture and practice in the health system;
- Be able to plan and manage human and material resources effectively and efficiently;
- Be able to address quality of care, clinical governance and risk management in health systems;
- Be able to contribute to the development of guidelines, policy or legislation using evidence based approaches.

5.6 Health economics and financing: Overall learning outcomes

Understand and apply principles and practices of health economics and financing at all levels within the health system.

Assessment criteria

- Be able to participate in and interpret an economic evaluation of health care;
- Be able to compile and manage a budget of a health programme, service or facility;
- Be able to analyse and interpret health accounts and financial statements in the health sector.

5.7 Research and training

- Actively participate in research and training related to public health medicine.

Assessment criteria

- Contribute to the education and training of medical students and other colleagues.
- Develop teaching material and teach in a variety of settings.
- Supervise a research project.
- Formulate a research question related to an issue of public health importance and design, conduct, analyse and report findings appropriately.
- Prepare and present a paper or poster at a scientific conference or publish a scientific paper.

6.0 CRITICAL CROSS-FIELD AND PERSONAL OUTCOMES

OUTCOMES (“BE ABLE TO”)

- 6.1 critically appraise the state of current knowledge with respect to important public health issues;
- 6.2 work as a team member, wherever this is important for the achievement of public health goals;
- 6.3 demonstrate good leadership skills where these may be required for the candidate’s future professional work situation;
- 6.4 demonstrate good analytical skills;
- 6.5 demonstrate an appropriate level of professional knowledge;
- 6.6 make public health-related decisions in a rational way;
- 6.7 solve public health-related problems effectively;
- 6.8 communicate effectively using written and oral methods
- 6.9 use science and technology responsibly and ethically;
- 6.10 demonstrate good interpretative skills as well as sensitivity for community values and the environment;
- 6.11 plan and execute public health interventions effectively;
- 6.12 assess one’s own personal strengths and weaknesses;
- 6.13 commit to a life of continual professional development;
- 6.14 act consistently within levels of competence and professional norms.

7.0 CURRICULUM AND SYLLABUS

These are attached as an Appendix.

8.0 CREDITS REQUIRED*

	<i>Credits</i>	<i>(Weeks)</i>
8.1 Credits for core learning (course work):	80	(20)
8.2 Credits for advanced learning (1) (short report):	16	(4)
8.3 Credits for supervised training attachments:	144	(36)
8.4 Credits for elective learning:	136	(34)
	<i>Credits</i>	<i>(Weeks)</i>
8.5 Credits for advanced learning (2) (dissertation):	64	(16)
8.6 Total credits required:	440	(110)

* *1 credit point equals 10 hours of notional learning. A 40 hour week of notional learning would equal 4 credit points*

9.0 MINIMUM CREDITS REQUIRED AT SPECIFIC LEVELS

9.1 Level 9: 480(120 weeks)

10.0 ARTICULATION POSSIBILITIES WITH RELATED QUALIFICATIONS
TITLE OF RELATED QUALIFICATION ***NATURE OF RELATIONSHIP***

10.1 Future sub-speciality in Infectious Disease Control Entry point

11.0 CRITERIA FOR REGISTRATION OF ASSESSORS

There will be at least 16 assessors for each examination. The assessors must be drawn from at least three academic institutions.

There will be 1 overall convenor. The convenor and assessors will be appointed by the president of the Council and must be drawn from a list of approved examiners that is ratified by the Council.

11.1 All examiners must hold 1 or more of the following degrees or qualifications (or their equivalent) for at least 2 years prior to the date of the first written paper

FCPHM(SA)

FCCH(SA)

MMed (Public Health Medicine)

MMed (Community Health)

11.2 A minimum of 60% of examiners should hold an academic appointment, either fulltime, part-time or honorary.

12.0 ADMISSION AS A FELLOW

12.1 Only candidates who have completed training in a CMSA recognised registrar post may be awarded a fellowship if successful in the examination.

12.2 **Candidates who have written the examination as a prerequisite from the HPCSA for inclusion on the specialist register are not eligible to be awarded a Fellowship but will be sent a letter confirming their success in the examinations**

All other candidates will be asked to sign a declaration as below:

I, the undersigned,do solemnly and sincerely declare

that while a member of the CMSA I will at all times do all within my power to promote the objectives of the CMSA and uphold the dignity of the CMSA and its members

that I will observe the provisions of the Memorandum and Articles of Association, By-laws, Regulations and Code of Ethics of the CMSA as in force from time to time

that I will obey every lawful summons issued by order of the Senate of the said CMSA, having no reasonable excuse to the contrary

and I make this solemn declaration faithfully promising to adhere to its terms

Signed at this day of

..... 20

Signature

Witness

(who must be a Founder, Associate Founder, Fellow, Member, Diplomat or Commissioner of Oaths)

12.3 A two-thirds majority of members of the CMSA Senate present at the relevant meeting shall be necessary for the award to any candidate of a Fellowship

12.4 A Fellow shall be entitled to the appropriate form of certificate under the seal of the CMSA

12.5 In the event of a candidate not being awarded the Fellowship (after having passed the examination) the examination fee shall be refunded in full excluding HPCSA candidates who are not entitled to a Fellowship

12.6 The first annual subscription is due one year after registration (statements are rendered annually)

APPENDIX A

THE CURRICULUM AND SYLLABUS FOR THE FCPHM(SA)

1.0 THE CURRICULUM

A week of notional learning is taken to be 40 hours for the purposes of these guidelines. Notional learning includes all types of learning, both formal and informal, from private study through group work activities, seminars, conference attendance and formal lectures.

1.1 Credits for core learning (20 weeks):

As a guideline for those who will make use of MPH modules to accomplish this part of the requirements through exploiting formal learning opportunities, the following rough breakdown of time spent is suggested as appropriate:

- Health measurement and informatics: 5.00 weeks
- Behavioural and social sciences: 1.00 week
- Occupational health: 2.00 weeks
- Infectious diseases, their prevention and control: 3.00 weeks
- Environmental health: 2.00 weeks
- Non-infectious diseases and their prevention: 2.00 weeks
- Health services management: 3.00 weeks
- Health economics, budgeting and finance: 2.00 weeks

1.2 Credits for MMed dissertation and long reports (20 weeks):

It is deemed that the MMed dissertation and short reports represent 20 weeks of notional learning.

1.3 Credits for supervised training attachments (36 weeks):

Supervised training attachments are deemed to provide notional learning at the rate of half the time spent. In other words, if a candidate has spent 12 weeks in a hospital management rotation then it is deemed that 6 weeks of notional learning has taken place. This assumption is informed by the Department of Education's policy for calculating the educational subsidies. As a result, a registrar will need to have spent 72 weeks in formal rotations in order to accumulate the credits for 36 weeks of notional learning.

Supervised training attachments should be used to demonstrate core theoretical learning in practise and to practise the skills outlined in Appendix A. These attachments also give the candidate the opportunity to observe and practise the integration of core knowledge from different subject areas, especially occupational and environmental health, disease control, monitoring and evaluation, and health policy and management. Attachments should be arranged at all levels of service delivery from district through regional to national, and may include up to 12 weeks spent in the private sector (but need not do so).

1.4 Credits for elective learning (34 weeks):

Elective learning may take the form of more advanced modular theoretical learning in the candidate's special area(s) of interest but may also include a limited amount of clinical learning, attendance at conferences and so forth. Where additional experiential learning is anticipated in this category it should be remembered that 1 week of experiential learning is deemed to take place over 2 weeks of attachment, so that it will then take longer for the candidate to achieve the goal of 110 weeks of notional learning prior to the examination. However, since most registrars will begin their training in January or February, and the earliest examinations each year are only written at the end of March/early April, this should not pose a problem.

The amount of clinical work permitted should be limited to 480 hours (equivalent to 6 weeks of notional learning at the 50% rule for learning during experiential or service provision time) and the amount of time spent at conferences should be limited to 10 days (equivalent to 2 weeks of notional learning).

1.5 Thus it should be clear that candidates are required to have spent 3 years in training before being admitted to the examinations (110 weeks of notional learning plus an extra 36 weeks during their 72 weeks of rotations: this is net of leave, sick leave, maternity leave and so forth).

2.0 THE SYLLABUS

2.1 Introduction

Guidelines pertaining to the syllabus for the FCPHM(SA) are presented below. These must serve as a guide only, and are supplied to assist candidates with determining the scope of their expected learning in preparation for the practical, written and oral examinations

For example, although most of the communicable disease control learning should involve common diseases, candidates should also be able to respond appropriately to diseases which are potentially important (ie Ebola virus disease), which are notifiable (ie Legionnaire's disease), which are burdensome because of chronicity or the duration of treatment required (Hansen's disease), or which are a real problem in certain areas of the country (ie trachoma or bilharzia)

Candidates should, in other words, view this syllabus as a guide rather than as a rigid and exclusive list of what needs to be learned. Candidates should also ensure that they are well abreast of current topics and debates which may not be specifically mentioned in the syllabus

For example, the use of insecticide-impregnated bed nets in malaria control efforts is an important issue which has become topical in recent years. Examiners would clearly feel justified in asking candidates to debate the evidence in favour of using these bed nets in the control of malaria, even although there was no specific mention of them in the syllabus

2.2 Arrangement of material

The syllabus has been divided into the following categories for convenience:

- Health measurement and informatics
- Social sciences
- Occupational health
- Communicable diseases
- Environmental health
- Non-communicable diseases
- Organisation, development and management of health care

Many different categories might have been used to classify the details of the syllabus guidelines, and some of the content of one category may well fit neatly into one or more alternative categories. These categories have been used in order to assist those who would like to use formal MPH learning opportunities for their examination preparation

The topics in the lists will mainly be examined directly in the first two written examination papers. However, the third, integrative, essay paper will also be best answered if the candidate has a thorough understanding of the concepts and topics listed. The same may be said of the second part of the oral examination

In working towards the short report and the dissertation, candidates will also experience deep learning of many of the concepts and topics presented on the next pages

First of all, lists of content are presented as a guide to the scope of the syllabus. Thereafter a list of expected skills is presented

2.3 THE SCOPE OF KNOWLEDGE EXPECTED FROM CANDIDATES

2.3.1 Health measurement and informatics

2.3.1.1 Epidemiology

History and scope: Inductive reasoning: Populations, samples, sampling methods: Surveillance, active, passive and sentinel: Measures of morbidity and mortality (rates, ratios, proportions): Measures of occurrence and effect: Study classifications: Study designs: Association and causation: Risk, absolute, relative, attributable: Populations aetiological fraction; Odds ratios: Bias and validity: Basic principles of epidemiology specific for occupational health (ie standardised mortality rates, healthy worker effect), Communicable diseases (ie reproductive rate, force of infection), Health systems (ie needs, utilisation, outcomes measurement): Screening tests and related measures: ROC curves and their interpretation: Questionnaires and their design: Ethics: Protocol writing: Research methodology: Literature appraisal and review: The levels of intervention/prevention: The triad of causation of disease (or an alternative model reflecting the multiple causative factors)

2.3.1.2 Biostatistics

Purpose and methods: Descriptive statistics: Type I and II errors: Confidence intervals, including those for rates and proportions: Hypothesis testing (common parametric and non-parametric methods, when to use which test, conditions for these tests, manual performance of tests not required): Estimation of sample size for point estimates of means and proportions, as well as for differences between 2 means and differences between 2 proportions: Correlation and regression methods: Multivariate analysis: Measurement of the burden of disease

2.3.1.3 Demography

The national census: Population pyramids: The demographic equation: The demographic transition: Fertility and its determinants: Migration (voluntary and forced, internal and cross-border, social/economic/class): The social, cultural, political and medical consequences of demographic change: Indicators (the infant mortality ratio, perinatal mortality rate, maternal mortality rate, life expectancy at birth, life expectancy at 1 year, total fertility rate etc ...), and their interpretation

2.3.1.4 Health informatics

Notification and reporting systems, their design and rationale: The principles of the design and use of electronic reporting and recording systems: The principles of integrated comprehensive systems involving relational databases and geographic information systems: Security aspects: Organisational issues relating to the use of electronic information systems. Paper-based systems and minimum data sets

2.3.1.5 Qualitative methods

Qualitative paradigms: Commonly used methods, when and how to use them, their limitations and strengths: Protocol writing and principles of analysis: Literature appraisal and review

2.3.1.6 Action research

Principles, uses and applications of action research (philosophy is not required)

2.3.1.7 Computer software

Word-processor: Spread-sheet and basic model building: Data-base and executing queries: EpilInfo: A statistical software package: A project management package

2.3.2 Social sciences

2.3.2.1 Medical sociology

Concepts of health and disease: Health seeking behaviour: Religious beliefs: Cultural values: Power and relationships: Vulnerable groups: Sexuality: Diffusion theory: Community consultation and participation: Development theory: Social policy

2.3.2.2 Sociological models of health

Social aetiology of health and disease

2.3.2.3 Industrial sociology

Organisational structures: Organisational behaviour: Models of organisations

- 2.3.2.4 **Psychology**
Early bonding and childhood development: Sociopathy: Aetiology of major social dysfunction behaviours including inter-personal violence and abuse: Substance abuse, its prevention and management: Personality and its relevance for peer, family and group influences: Psychometric testing, its scope, strengths and weaknesses (includes IQ testing)
- 2.3.2.5 **Health economics finance and budgeting**
Microeconomic theory relating to supply and demand, price formation, elasticities, monopolies, utility measures and social indifference curves: Market failure and the rationale for government interventions: Costs (economic, accounting, direct, indirect, average, incremental, marginal, stepped-down). Cost analysis (effectiveness, benefit, utility, minimisation): Budgeting systems and applications: General taxes (direct, indirect): Equity and its measurement: National health accounting: Basic discounting: Basic financial and management accounting, medical insurance, medical schemes: User fees, cost recovery, for-profit services: Managed care tools, motives and mechanisms: Related legislation: Microeconomic theories of fertility: Basic environmental economics including Pigouvian subsidies and taxes: Basic development economics, indicators of development: Globalisation trends and their impact on health and work
- 2.3.2.6 **Social marketing**
Includes the determinants of success or failure of preventive and curative care, as well as relevant behaviour issues

2.3.3 **Occupational health**

- 2.3.3.1 **Occupational diseases**
Respiratory, ENT, skin, neurological, musculo-skeletal, reproductive, renal, hepatic, haemopoietic, infectious: Chest radiology: Audiometry: Lung function tests: Allergy tests: Neuro-behavioural testing: Disability assessment, rehabilitation: Commonly occurring occupational diseases in South Africa: Occupational zoonoses: Sick building syndrome: The aetiology, diagnosis, prevention, screening, reporting and further management of these conditions (include a knowledge of genetic, immunological, nutritional and psycho-social aspects)
- 2.3.3.2 **Occupational hygiene and risk assessment**
Risk assessment: Hazardous exposures: toxicology, ergonomics: Principles of toxicology: Principles of occupational hygiene: measurement and control technologies: Exposure standards: Hazardous dusts, gases: Organic solvents, metals, pesticides: Plastics: Biological hazards: Ergonomic hazards and principles of control: Safety, environment, industrial sociology: Theories of safety and accidents: Psychosocial hazards and conditions
- 2.3.3.3 **Occupational health services**
Industrial relations applied to health and safety: Worker participation: Environmental policy and impacts: Occupational health services: Workplace risk assessment: Design and management of workplace health services: Medical surveillance: Health benefits: Ethical issues: Disaster planning: Health promotion: Worker education: Environmental impact assessment: Health and safety laws, policy and programmes: Standards setting and regulations: National provincial, district occupational health and safety policy and programmes: Compensation regulations

- 2.3.4 **Communicable diseases**
- 2.3.4.1 **Communicable diseases**
Commonly occurring communicable diseases in South Africa such as sexually transmitted diseases, human immunodeficiency virus infection, tuberculosis, malaria, childhood diarrhoeal diseases, childhood acute respiratory infections, the viral hepatitis, water-related diseases including schistosomiasis: Vaccine preventable diseases: Formidable epidemic diseases: Other notifiable diseases: Biological warfare agents: The aetiology and contributing factors (host, agent, environment), life cycles, diagnosis, prevention and management of these diseases (including a knowledge of microbiological, genetic, immunological, nutritional and psycho-social aspects): Surveillance: Vaccines and the cold chain: Immunotherapy: Chemoprophylaxis: Envenomation: Basic medical entomology
- 2.3.4.2 **Control programmes**
The design, rationale, implementation and evaluation of control interventions as vertical programmes or integrated activities: Outbreak investigation/response: Vector and reservoir control
- 2.3.5 **Environmental health**
- 2.3.5.1 **Basic theory and its importance for health**
Desertification/deforestation, global warming, ozone layer, acid rain, pollution of water/soil/air
- 2.3.5.2 **Scope**
Clean air and water; Safe waste disposal; Vector control; Housing; Municipal services; Road, rail, sea and air transport; Schools; Sports and recreation and related facilities, the social environment (interpersonal violence and abuse), radiation, non-ionising radiation: Surveillance for environmental risks: The epidemiology and prevention of injury and disease from environmental exposures: Environmental management in closed communities (ie refugee camps): Environmental noise: Vehicle and traffic-related problems: Genetically modified organisms: Radiation and toxic waste
- 2.3.5.3 **Impact assessments**
The impacts of large engineering and/or development initiatives on health and safety: The role of public health specialists in the impact assessments and planning of such interventions
- 2.3.5.4 **Industrial waste**
Surveillance, management and control of industrial effluents
- 2.3.5.5 **Legislation**
Common law and statutory remedies (including, for example, statutes relating to clean water provision, air pollution, radiation, foodstuffs and disinfectants, hazardous substances, road traffic regulation: animal hygiene, toxic waste): Relevant international conventions and agreements
- 2.3.6 **Non-communicable diseases**
- 2.3.6.1 **Non-communicable diseases**
Knowledge of important non-communicable diseases in South Africa (cardiovascular disease, asthma, diabetes mellitus, nutritional deficiencies, obesity, substance abuse, psychiatric illnesses, genetic disorders, arthritides, cancers): Epidemiology, screening, prevention, economic burdens and surveillance
- 2.3.6.2 **Control of non-communicable diseases**
The design of integrated activities aimed at the prevention and/or the early detection and containment of these diseases (include a knowledge of genetic, immunological, nutritional and psycho-social aspects): Systems for the management of patients

- 2.3.7 **Organisation, development and management of health care**
- 2.3.7.1 **Health systems**
The levels of service provision and their interrelationships: The members of the health team, their competencies and contributions to public health: Intersectoral responsibilities for public health efforts: Opportunities for private/public collaboration: Principles and implementation of district health systems: The levels of government, theory of decentralisation: Comparative health systems: Their design, evolution, and evaluation. Medicines control, registration: essential drugs lists
- 2.3.7.2 **Resource and facilities planning**
Human, capital, facilities: Needs assessment: Public and private sectors: Resource allocation methodologies
- 2.3.7.3 **The legal environment**
The regulatory system: Relevant legislation including the Constitution Act, Health Act, Exchequer Act, Employment equity Act, Occupational Safety Act, Compensation for Occupational Injuries and Diseases Act, Conditions of employment Act, Public service regulations, contract, consent, negligence, relevant international conventions, and other relevant legal matters
- 2.3.7.4 **The political environment**
Power relationships: The formal political system and the way it is organised and functions: Informal power structures: Political commitment: Lobbying & “pacting”: The growth of government
- 2.3.7.5 **International health**
International health organisations including the WHO, UN, ILO, IOM, Medecins Sans Frontieres, ICRC, IUATLD. Health related international agreements, and conventions
- 2.3.7.6 **Problem solving and decision making**
Basic theory on how decisions are made, and problems solved: Quantitative tools such as time series analysis, forecasting, queuing theory, linear programming, networks analysis, inventory management, minimum order quantity, risk assessment, prioritisation: Qualitative tools such as focus groups, in-depth interviews, Delphi panels, nominal groups: Action research methods: Project appraisal: Project management methodologies
- 2.3.7.7 **Miscellaneous strategic issues**
The special nature of services, in particular health services, and their management and marketing: Motivational theory: Quality surveillance, service quality measurement, quality assurance tools, implementation and evaluation: Leadership theory and motivation: Waste minimisation: Security: Basic models for operational systems: Change management theories and practice
- 2.3.7.8 **Strategic thinking and acting**
Be familiar with, and develop an individual approach from basic planning approaches, systems approaches, futures approaches, excellence/quality approaches

3.0 THE SCOPE OF SKILLS EXPECTED FROM CANDIDATES

The items listed below are grouped in the same way as the lists pertaining to knowledge. As with the lists of knowledge, the skills list below is merely offered as a guideline, to indicate the scope that is required. The list decomposes the Overall Learning Objectives and Assessment Criteria further, to give more specific guidance, especially for learning experiences during the attachments. Candidates are expected to able to:

- 3.1 **Health measurement**
- 3.1.1 Conduct discourses on quantitative and qualitative methodologies, and the theories in which they are embedded;
- 3.1.2 Describe the state of health and the burden of illness affecting a community by interpreting demographic, mortality and morbidity data and qualitative data, as well as health service utilisation data;
- 3.1.3 Compile a comprehensive “community diagnosis” for a defined community;

- 3.1.4 Make valid comparisons of health status and of factors affecting health between communities by applying/using relevant health indicators;
 - 3.1.5 Assemble and interpret relevant knowledge on a particular topic from literature review and other sources;
 - 3.1.6 Critically appraise scientific literature;
 - 3.1.7 Manage and analyse epidemiological data sets of an appropriate size and complexity;
 - 3.1.8 Calculate sample sizes for point estimates of means or proportions as well as for studies to test the differences between two means or two proportions;
 - 3.1.9 Carry out different kinds of sampling techniques under appropriate conditions, from simple random samples to multi-level cluster samples to convenience samples and “snowballing”;
 - 3.1.10 Research health problems using a full range of methods from descriptive surveys to randomised controlled trials and meta-analysis;
 - 3.1.11 Research health problems, where appropriate, using validated qualitative research techniques;
 - 3.1.12 Design, validate, implement and analyse the results from questionnaires;
 - 3.1.13 Use action research methods, participative and non-participative, qualitative and quantitative, in appropriate situations;
 - 3.1.14 Design in concept form, an integrated health information system using participative methods;
 - 3.1.15 Evaluate a new screening test and make recommendations concerning its use;
 - 3.1.16 Identify which statistical test of significance to use for different data sets and under different research circumstances;
 - 3.1.17 Interpret computer print-outs summarising the results of commonly encountered parametric and non-parametric tests of statistical significance or association
- 3.2 **Social sciences**
- 3.2.1 Identify features in the psychological, religious and cultural environment which enhance or threaten health;
 - 3.2.2 Prepare, test and evaluate health education materials;
 - 3.2.3 Conduct a valid assessment of health-related needs;
 - 3.2.4 Conduct a valid survey of health-related felt needs;
 - 3.2.5 Select the best tools for a given educational situation and use them well;
 - 3.2.6 Facilitate a focus group;
 - 3.2.7 Interpret a set of national health accounts;
 - 3.2.8 Collaborate with health economists in evaluation of equity, effectiveness and efficiency of public health interventions;
 - 3.2.9 Collaborate with economists and accountants in the estimation of costs of a public health intervention;
 - 3.2.10 Apply economic theory in the analysis of health sector prices and their trends;
 - 3.2.11 Draw up a departmental budget;
 - 3.2.12 Interpret a set of financial statements;
 - 3.2.13 Analyse health sector organisational functioning using appropriate sociological theory, and recommend interventions where appropriate;
 - 3.2.14 Analyse and draw up a change strategy for a health sector organisation;
 - 3.2.15 Describe the health and social problems faced by migrants, voluntary or non-voluntary, documented or undocumented, making appropriate recommendations;
 - 3.2.16 Compile a social marketing plan for a health intervention;
 - 3.2.17 Identify vulnerable groups and assess their special health risks and needs
- 3.3 **Occupational health**
- 3.3.1 Describe commonly occurring occupational diseases in South Africa, including epidemiology, diagnosis and management;
 - 3.3.2 Describe the commonly occurring hazardous workplace exposures in South Africa, including toxicology and control measures;
 - 3.3.3 Design medical surveillance programmes relevant to 3.1 and 3.2;
 - 3.3.4 Describe principles of assessment, accommodation, rehabilitation and compensation of workers suffering from incapacity, including but not limited to that caused by occupation;
 - 3.3.5 Undertake health risk assessment of workplaces;
 - 3.3.6 Design appropriate occupational health service for a given workplace;
 - 3.3.7 Describe principles of occupational hygiene control of hazards, and be able to interpret an occupational hygiene report;
 - 3.3.8.../

- 3.3.8 Describe main ergonomic risk factors for occupational ill-health and ergonomic principles of prevention;
 - 3.3.9 Design a public sector occupational health programme at provincial/district level;
 - 3.3.10 Describe main features of South Africa's health and safety laws;
 - 3.3.11 Describe the channels for setting public policy and regulation in occupational health, and the principles on which standards are based;
 - 3.3.12 Apply ethical principles to identifying or resolving situations posing ethical problems in occupational health;
 - 3.3.13 Describe the industrial relations framework in South Africa, particularly as it applies to occupational health and safety;
 - 3.3.14 Describe the principles of adult education as applied to health and safety training and be able to evaluate information materials;
 - 3.3.15 Design a disaster plan for a work place;
 - 3.3.16 Perform a walk-through inspection of a work place;
 - 3.3.17 Evaluate an occupational health service;
 - 3.3.18 Perform lung function tests and interpret results;
 - 3.3.19 Perform and interpret skin patch tests;
 - 3.3.20 Perform a survey of sound levels, gases, dust and climate;
 - 3.3.21 Complete claims for compensation for occupational diseases;
 - 3.3.22 Make recommendations for the setting up of an occupational health service;
 - 3.3.23 Investigate an occupational health problem by designing and conducting an occupational epidemiology study
- 3.4 **Communicable diseases**
- 3.4.1 Describe features of individuals which may render them more susceptible to communicable diseases;
 - 3.4.2 Describe the life cycles of human parasites and pathogens, as well as their reservoirs and vectors, where appropriate, in order to be able to make recommendations for interventions aimed at control of the spread of the relevant communicable disease;
 - 3.4.3 Describe features of the environment which promote the spread of communicable diseases;
 - 3.4.4 Describe in detail, disease control interventions and protocols for common and/or serious communicable diseases, ie malaria, tuberculosis, childhood diarrhoeal diseases, acute respiratory infections, STDs and HIV, typhoid, cholera, plague, haemorrhagic fevers, meningitis, measles, neonatal tetanus, polio;
 - 3.4.5 Describe in principle, disease control interventions for less common communicable diseases;
 - 3.4.6 Critically analyse official disease control programmes for tuberculosis, malaria, STDs, HIV, and the EPI diseases;
 - 3.4.7 Conduct a critical and detailed discourse on the advantages of breast feeding in developing countries, as well as the policy implications;
 - 3.4.8 Describe the epidemiology, diagnosis, treatment and prognosis of the notifiable communicable diseases;
 - 3.4.9 Discuss problems of drug and insecticide resistance and their prevention as well as policy implications;
 - 3.4.10 Conduct outbreak investigations, plan and implement appropriate responses;
 - 3.4.11 Advise policy makers on appropriate active, passive and sentinel surveillance measures for both new cases and cases of drug resistance
- 3.5 **Environmental health**
- 3.5.1 Describe features of the physical, biological, recreational, educational and socio-political environments which enhance or threaten health, and prioritise them;
 - 3.5.2 Make recommendations for the safety and security of foodstuffs;
 - 3.5.3 Interpret and transform into action guidelines technical reports concerning the physical, chemical and biological monitoring of air, water and soil, and concerning environmental problems related to radiation and noise pollution;
 - 3.5.4 Evaluate water supplies (quality and quantity), sanitation, and refuse services;
 - 3.5.5 Recognise, describe, prioritise, explain and analyse environmental degradation;
 - 3.5.6 Make recommendations for hazardous waste management, biological, medical, radio-active and chemical;

- 3.5.7 Work with engineers and developers to identify possible environmental health hazards from planned developments, and make recommendations for the elimination or amelioration of these hazards;
- 3.5.8 Work with engineers and legislators to reduce hazards faced from the transportation system;
- 3.6 **Non-communicable diseases**
 - 3.6.1 Detail human factors which increase risks for non-communicable diseases;
 - 3.6.2 Describe features of the environment, including the workplace, which increase the risks for non-communicable diseases;
 - 3.6.3 Describe the burden of non-communicable diseases for different at risk communities in South Africa;
 - 3.6.4 Design strategies for reducing the incidence of non-communicable diseases;
 - 3.6.5 Advise policy makers on measures which might be taken to reduce the incidence of nutritional and genetic disorders as well as common cancers;
 - 3.6.6 Design a programme to reduce substance abuse or smoking in a community;
- 3.7 **Organisation, development and management of health care**
 - 3.7.1 Evaluate health programmes at all levels of intervention and all levels of care;
 - 3.7.2 Make forecasts for future health care needs/demands;
 - 3.7.3 Function effectively as a member of a team and collaborate with other health care officials and people in non-health sectors;
 - 3.7.4 Be a competent negotiator in the work place and on behalf of communities;
 - 3.7.5 Be able to advise on the implementation of health-related legislation;
 - 3.7.6 Draft statements of Purpose, Mission, Aims, Goals and Objectives for a defined health sector organisation;
 - 3.7.7 Perform a Delphi survey and a nominal group survey of expert opinion under appropriate circumstances;
 - 3.7.8 Plan, implement and evaluate a medical audit;
 - 3.7.9 Assess the quality of services delivered by a health care unit;
 - 3.7.10 Identify and implement strategies for quality assurance;
 - 3.7.11 Convene, chair and minute a meeting;
 - 3.7.12 Carry out an inspection of a health care facility and its operations, and make relevant practical recommendations;
 - 3.7.13 Write a technical annual health report for an institution or health district;
 - 3.7.14 Conduct a grievance investigation according to prescribed procedure;
 - 3.7.15 Evaluate the performance of an employee;
 - 3.7.16 Conduct a job interview;
 - 3.7.17 Manage a project effectively using an established project management approach and tools, including computer software;
 - 3.7.18 Plan the size and position of a health care facility using demographic data, clinical profiles and survey data;
 - 3.7.19 Estimate an appropriate minimum order quantity;
 - 3.7.20 Evaluate a health system;
 - 3.7.21 Prepare a strategy for a health care organisation, using an appropriate, motivated approach;
 - 3.7.22 Write marketing and business plans for a public health organisation or activity
- 3.8 **General**
 - 3.8.1 Describe one's own professional weaknesses and devise a plan to remedy these;
 - 3.8.2 Communicate effectively, verbally and in writing, at appropriate levels of sophistication, with a variety of community and professional groups, as well as the media;
 - 3.8.3 Advocate effectively for public health improvements and an appropriate allocation of resources and funds to health authorities;
 - 3.8.4 Use a personal computer;
 - 3.8.5 Prepare and present a poster at a scientific conference;
 - 3.8.6 Prepare and present a paper at a scientific conference;
 - 3.8.7 Prepare and present a paper for and to a lay audience;
 - 3.8.8 Facilitate a technical discussion group

APPENDIX B

1.0 GUIDELINE FOR RESEARCH REPORTS

1.1 Although the Universities may at their discretion and depending on their rules for their MMed degrees accept research reports that are either qualitative or quantitative in nature, candidates whose M Meds are based on qualitative methods, must then choose a rigorous quantitative method for their short report so as to maximise their learning experience and demonstrate breadth of learning. MMed and Short Report should not be on the same topics and should address substantively different questions. While the rules of each University will apply to the MMed degrees, candidates for entry to the College examinations should note that if their M Med thesis was based on secondary analysis of data, then they would be expected, in some other assessment methods (e.g, Short Report) to demonstrate competence in research methods which cannot be demonstrated when doing a thesis based on secondary analysis of data.

1.2 Short reports:

The objective of the short report is for the candidate to demonstrate that he or she can write a well-structured, useful report on a public health subject, and communicate its findings. Whatever the form or subject, the report must include a justification or genesis, a structured method, the collection of information or evidence which may be qualitative or quantitative, and interpretation and/or recommendations. The report should add new information or knowledge through data collection or review combined with interpretation and evaluation of the quality of the data or evidence. The report must also be presented to an appropriate audience which represents an audience able to act on the findings.

1.3 Suggested suitable short reports could include situation analyses, rapid assessments, audits, problem solving reports, policy analyses, indicator development and testing, and formal studies, whether qualitative or quantitative, including primary or secondary data analysis.

1.4 Ethics:

It is expected that all MMed theses would be conducted with Ethics Committee approval. For Short Reports, Ethics approval will also be expected unless the Head of Department motivates in writing why ethics approval was not necessary for the short report.

2.0 THE COMPUTATION OF THE FINAL MARK:

2.1 The candidate passes or fails on the basis of the overall average mark achieved for the short report, written papers and orals. The pass mark is 50%

2.2 The different parts of the examination are weighted in the final average mark as follows (an average mark of 50% or higher for the four written papers is required in order to qualify for the OSPE):

Short report	20/100
Multiple choice papers (10/100 each)	20/100
Short answer papers (10/100 each)	20/100
OSPE	40/100

2.3. Note that the candidate must obtain an average passing mark (50% or greater) for the four written papers.

3.0 WHAT HAPPENS IF A CANDIDATE FAILS THE EXAMINATION?

- 3.1 Where a candidate fails to achieve an overall mark of 50% for the examination the examiners may recommend that the candidate be exempted from repeating one or more of the following sections in future attempts, provided that they have been passed at the current attempt and that the candidate wishes this; and that the candidate attempts the examination at the next available opportunity:
- The short report
 - The 4 written papers
 - The OSPE
- 3.2 In such cases the marks for the exempted sections must be carried forward to the next attempt, and a distinction may not be awarded at that attempt.
- 3.3 If the candidate is still unsuccessful (i.e. aggregate mark is still <50%) then the entire examination must be re-taken at the following attempt, except that the candidate may be exempted from repeating the MMed dissertation.

4.0 FEEDBACK TO THE CANDIDATE:

- 4.1 The conduct and the outcome of the examination are confidential in the sense that details may only be discussed with the candidate concerned. However, the candidate may give permission to the examiners to report back to the candidate's head of department or other academic supervisors.

Candidates who require feedback should request this after the examiners' meeting, which follows immediately after the oral examinations.

APPENDIX C

1.0 THE FORMATIVE ASSESSMENT FORM (PORTFOLIO)

FORMATIVE ASSESSMENT OF CANDIDATES WHO WISH TO WRITE THE FCPHM(SA) EXAMINATION OF THE COLLEGE OF PUBLIC HEALTH MEDICINE OF SOUTH AFRICA

This formative assessment should be carried out approximately every 6 months by the candidate and his/her Head of Department (HOD). The formative assessment provides an opportunity for the candidate and HOD to regularly review the learning that has taken place, and that is planned for the next 6 months. "Dummy" entries have been typed in to the tables to give an idea of how to complete the form.

Rotation Number:

CANDIDATE'S NAMES:		
NAME OF INSTITUTION:		
NAME OF HOD:		
PERIOD COVERED:	FROM:	TO:
PLACE OF ROTATION		
NAME OF SUPERVISOR(S)		

TABLE IA: THE CANDIDATE'S LEARNING PLAN FOR THE NEXT 6 MONTHS
(TO BE COMPLETED AT THE BEGINNING OF A ROTATION)

NO	COLLEGE SKILL LIST REF	MAJOR LEARNING OUTCOMES	ACTIVITIES PROPOSED
	GROUP:		
1		20% of the outcomes listed under biostatistics in the CMSA regulations Appendix A	Two stats modules
2		Writing a study protocol Undertake a health risk assessment of a workplace	Rotation at NIOH (3/12)
3		Learning about the duties of the MS Learning about the HIS and its strengths/weaknesses and how to improve it Conducting meetings	Attachment at hospital (2/12)

TABLE IB: LEARNING OBJECTIVES FOR THE PERIOD UNDER REVIEW
(TO BE COMPLETED AT THE END OF A ROTATION)

NO	COLLEGE SKILL LIST REF	MAJOR LEARNING OUTCOMES	ACTIVITIES PERFORMED
GROUP:			
1		20% of the outcomes listed under biostatistics in the CMSA regulations Appendix A	Attended the modules. In addition attended a seminar on Structural Equation Modeling.
2		Writing a study protocol Undertake health risk assessments.	Completed the rotation. Developed the study protocol and obtained ethics approval before commencement. Undertook two health risk assessments: one at a foundry and the other at a cement factory.
3		Learning about the duties of the MS Learning about the HIS and its strengths/weaknesses and how to improve it Conducting meetings	Completed hospital rotation. Worked closely with the MS. Wrote up a description of the HIS system, identified weaknesses in the current HIS system and developed strategies for improvement. I was unable to chair any meetings.

TABLE II: THE CANDIDATE'S SELF-ASSESSMENT OF THE LEARNING EXPERIENCE

	ACTIVITY	COLLEGE SKILL LIST REF	LEARNING EXPERIENCE
1.	Attended the modules. In addition attended a seminar on Structural Equation Modeling.		Two stats modules were attended, final mark was 83%. I feel I mastered all the topics covered but will need to consolidate my learning about logistic regression modelling through practical experience by collecting and analyzing suitable data. I could achieve this by constructing a hypothetical data set for a hypothetical study and then asking Dr X to review the way in which I analyzed the data. I also need more experience using Stata, and such an exercise will be helpful with this as well. I will incorporate this suggestion into my next learning plan.
2.	Completed the rotation. Developed the study protocol and obtained ethics approval before commencement. Undertook two health risk assessments: one at a foundry and the other at a cement factory.		The rotation at NIOH (3/12) was useful. I developed a protocol for a hepatitis B staff immunisation survey that is now being implemented. In addition I completed two risk assessments with the support of the Occupational Hygienist. I now feel reasonably confident that I will be able to conduct risk assessments independently.

<p>3.</p>	<p>Completed hospital rotation. Worked closely with the MS. Completed hospital rotation. Worked closely with hospital manager. Wrote up a description of the HIS system, identified weaknesses in the current HIS system and developed strategies for improvement.</p>		<p>The attachment at the hospital (2/12) was only partially successful. I was never permitted to actually convene and chair any meetings, so although I have observed the process I feel I need to actually do it to be more confident. I will ask the HOD if I might convene, chair and minute some departmental meetings over the next 3 months and ask the staff of the department to feedback and critique my performance.</p> <p>Regarding the HIS I wrote up a description of the system and made recommendations to the MS. We held a 1 day workshop with 40 participants at the end of the attachment in which participants identified those parts of the report that were worth taking forward. They also identified a work plan for the implementation of these proposals. I feel, however, that the workshop participants did not really accept some of the findings and recommendations that I thought were more important, while dwelling on “smaller” issues that I felt were less important. One of the problems was that my supervisor was not available to chair the workshop and so it was chaired by one of the MSs who is not involved with the HIS. Also, although my report was ready 2 weeks before the workshop I would have preferred to have discussed it with my supervisor before circulating it to the workshop attendees, but my supervisor was overseas at the time.</p>
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Tables IIIA and IIIB should be completed by the Supervisors after receiving completed Table I and II at the end of the rotation.

TABLE IIIA: SUPERVISOR’S ASSESSMENT OF THE LEARNING EXPERIENCE

LOCAL/SERVICE SUPERVISOR

<p>1.</p>	<p>-</p>
<p>2.</p>	<p>Dr Z came into this rotation with prior experience in public health concepts which gave her a basis for understanding occupational health concepts. She really enjoyed working in the clinic and finalized her cases on time and professionally. She covered most of her objectives within this short space of time and coped well with pressure. She could have consolidated some of her knowledge through more factor visits but unfortunately there is only so much that can be done within 3 months. Unfortunately</p>
<p>3.</p>	<p>Dr Z rotated at the hospital during a period where I was away on leave for a period of time. This, with the length of the rotation, limited the amount of time I could dedicate to her. I would have also preferred to look at her HIS report before the workshop but this was not feasible. She also did not have an opportunity to chair a meeting due to time constraints. I made a strategic decision regarding the Workshop as I felt that it was important for staff buy-in to have a senior person in management chair the meeting.</p>

LOCAL/SERVICE SUPERVISOR

DATE

DESIGNATION

TABLE IIIB: SUPERVISOR'S ASSESSMENT OF THE LEARNING EXPERIENCE**SPECIALIST/ACADEMIC SUPERVISOR**

1.	I would support that the candidate designs and carries out this statistical analysis exercise and will ask the biostatistician to give her help with assessment.
2.	Good learning appears to have taken place. Since the candidate is especially interested in occupational lung disease, I will try to arrange for a further attachment next year during which he should work on a project that will be suitable for the dissertation.
3.	<p>The candidate can chair the monthly education committee meeting for the next 4 months. We will all meet between each meeting to give feedback and advice.</p> <p>E-mail could have been used to keep in contact with the supervisor: He however did not have e-mail access while travelling. In future all staff who are travelling on business should arrange e-mail contact prior to departure if this is deemed necessary. A further rotation in hospital management might be required.</p> <p>The candidate would probably benefit from attending the negotiation skills module that is offered at the Business School in three months' time.</p>

SPECIALIST/ACADEMIC SUPERVISOR

DATE

DESIGNATION

Table IIIC should be completed by the Academic Coordinator/ HOD after having met with the candidate to discuss the contents of Table I, II and Tables IIIA and IIIB.

TABLE IIIC: THE ACADEMIC COORDINATOR/ HOD'S ASSESSMENT OF THE LEARNING EXPERIENCE

Dr Z has learnt a lot in the last six months and has covered a number of skills. Substantial work was done in both rotations but it does appear that further time in both will still be required. Dr. Z's rotation plan for the remaining years will be reviewed and adjusted accordingly. The gaps in skills that have been identified by the specialist supervisor will be addressed in future rotations.

ACADEMIC CO-ORDINATOR

DATE

DESIGNATION

TABLE IV: FINAL COMMENTS

a) FROM THE REGISTRAR:

I appreciate the feedback from the local and specialist supervisors and will work at addressing
the gaps. I recognise the difficulties with having short rotations and will take into account the
suggestions that I may need to do additional time in similar rotations.

b) FROM THE HOD:

This had been a good learning opportunity for Dr. Z. A substantial number of skills and content
areas were covered.

SIGNED:

(REGISTRAR)

DATE

(HOD)

DATE