NATIONAL UNIVERSITY OF SINGAPORE

DIVISION OF GRADUATE MEDICAL STUDIES

BASIC AND ADVANCED SPECIALIST TRAINING REQUIREMENTS FOR THE
SPECIALTY OF

OCCUPATIONAL MEDICINE
# Basic and Specialist Training Requirements for Occupational Medicine

## Basic and Specialist Training in Occupational Medicine

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1. Specialist training of medical doctors in Singapore has been organized by the Division of Graduate Medical Studies (NUS), the Ministry of Health and the Academy of Medicine as a continuum of training following full medical registration. The programme will take about 6-7 years, comprising basic training and advanced training. Candidates will have to obtain the M. Med degree or equivalent, usually after completing the basic component. Following that they will move into the advanced phase, which then culminates in the certification of these doctors as specialists in the designated field by the Specialist Accreditation Board.

2. For Occupational Medicine (OM), the following structure will apply:
   (a) Basic Training – Normally 3 years, to start any time after full medical registration.
   (b) Advanced Training – Normally 2 years, to start when the candidate has satisfied all the entry requirements.

II  HISTORY AND DEFINITION

1. Postgraduate training in occupational medicine was first organised in Singapore in 1973, with the establishment of a course leading to the Master of Science (Occupational Medicine). The course, confined only to medical graduates, has undergone various revisions to reflect changing needs and emphases in the practice of occupational health in Singapore and the region. As of 1992, the degree has been renamed Master of Medicine (Occupational Medicine).

2. Occupational medicine is the study and practice of medicine related to the effects of work on health and health on work. Its desired goals are the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations.

III  OBJECTIVES

1. The training programme will provide the trainees with knowledge and understanding of the health and welfare of people at work. The qualification is intended for medical practitioners who wish to become specialists-in-training in the field of occupational medicine.

2. The academic phase of the training consists of an approved course of study in Occupational Medicine in an accredited institution. It may take up to one academic year full-time, or longer if done part-time.

3. As the academic training is an essential component of the training programme, the specific objective of the course is to provide sufficient knowledge and skills to medical graduates so that they can undertake postings as specialists-in-training in Occupational Medicine.

4. The core competencies that are expected of the graduates are as follows:
A. Clinical
1. Apply clinical skills in order to diagnose, assess and advise on the management of disease and injury in relation to work.
2. Determine the relationship between health and fitness to work.
3. Advise on the impact of major contemporary health issues on the workplace.

B. Technical
i. Epidemiologic
Plan, conduct and analyse epidemiologic studies, including surveys in the workplace, with the appropriate use of biostatistical techniques;
Assess health needs of the working population, in the context of health research and health care planning and evaluation;
Review, appraise and disseminate health information in the practice of evidence-based health care;
Investigate and control occurrences, including outbreaks, of infectious and non-communicable diseases, using relevant approaches and technologies;

ii. Workplace Assessment
Undertake assessments of the working environment in order to recognise, evaluate and control physical, chemical, biological design, and psychosocial hazards in the workplace.

iii. Legislation Regulations and Medico-legal matters
Interpret the legislative, regulatory and medico-legal aspects of occupational health and safety and be able to apply these in occupational health and safety practice.

iv. Management
Understand how organisations function and be able to manage an occupational health and safety service within an organisation in order to negotiate and implement change to prevent and monitor occupational injury and illness.

v. The Environment
Advise on the effects on humans of external physical, chemical biological, psychosocial and mechanical factors in the general environment. The competencies required in occupational medicine are equally applicable to environmental medicine, though important differences, such as those associated with population size and dose, apply.

C. Practice
1. Able to effectively communicate knowledge and opinion at individual, corporate, organisational and community levels in order to put the principles and concepts of occupational health into practice.
2. Advocate for occupational health programmes and resources;
3. Work effectively in an occupational health team.
IV BASIC TRAINING PROGRAMME

1. DURATION

In general, this covers a minimum of 3 years culminating in the examination for the M.Med. (Occupational Medicine) degree. The outline is as follows:

Post registration

Year 1  Clinical phase - Start of traineeship
Year 2  Practical phase - Full-time Occupational Medicine/or Public Health Medicine experience
Year 3  Academic phase - Occupational Medicine Course
End-Point  M.Med.(Occupational Medicine) Examination

2. ENTRY FOR TRAINING

Medical graduates who are fully registered and have had a medical qualification for at least two years are eligible to enter the training programme.

3. CONTENT OF TRAINING

(1) Year 1: General Clinical Phase

The trainee should have one year of general clinical experience following housemanship. This will ensure that he has a good appreciation of the breadth of clinical problems encountered in the community. The preferred postings (of at least 3 months) would include general medicine, general surgery, paediatrics, obstetrics and gynaecology, accident and emergency, and community health service (Outpatient Service).

(2) Year 2: Practical Phase - Full-time Occupational Medicine and/or Public Health Medicine experience.

Occupational Medicine Experience.

The trainee should have at least one year’s working experience in occupational medicine in any of the following:

(a) Industrial/Occupational Health Department of the Ministry of Manpower.
(b) Armed Forces; recognition varies on basis of national service or regular army appointment
(c) University departments of Occupational/Community Medicine/ Public Health
(d) Occupational health practice in the private sector; recognition varies on basis of full-time or part-time appointments.
Public Health Medicine Experience
The trainee should have at least one year’s working experience in public health in one or more of the following departments:
(a) Hospital/Health Administration
(b) Research & Evaluation
(c) Community Health Service
(d) Maternal & Child Health
(e) Training & Health Education
(f) Epidemiology & Disease Control
(g) Armed Forces: recognition varies on basis of national service or regular army appointment.
(h) University departments of Community Medicine/Public Health

3. Year 3: Academic Phase: Occupational Medicine Course
The general aim of the course is to provide medical trainees with sufficient knowledge and skills to undertake postings as specialists-in-training in OM. It may take up to one academic year or longer, if done part-time. The course also includes the writing up of a project in the form of a dissertation.

4. DEPARTMENTS ACCEPTED FOR TRAINING

1. Local:
Ministry of Health - Hospital/Health Administration
- Research & Evaluation
- Community Health Service
- Training & Health Education
- Epidemiology & Disease Control
- Maternal & Child Health
Ministry of Manpower - Department of Occupational Health
Ministry of Defence - The Armed Forces Medical Services (Public Health/Occupational Health aspects)
Ministry of the Environment - Quarantine & Epidemiology
National University of Singapore – Department of Community, Occupational and Family Medicine

2. Overseas (generally):
Medical officers working in:
- Occupational Health or public health in the Ministry of Labour or Health or other relevant ministries/departments.
Basic and Specialist Training Requirements for Master of Medicine In Occupational Medicine

- Armed Forces service.
- Occupational health or public health in University departments
- Occupational medicine in private sector.

5. **EDUCATIONAL ACTIVITIES TO BE INCLUDED IN THE TRAINING**

Besides the academic course, the other educational activities will comprise teaching sessions organized within each department, project work, talks to various groups, write-ups on research projects and case conferences.

The checklist of work experiences for basic/advanced trainees are as follows:

(a) Perform a literature search and write a review of a health topic.
(b) Conduct and report on a situational assessment exercise.
(c) Conduct, analyse and report on a simple health-related project.
(d) Write a memorandum on a health topic.
(e) Participate in the investigation and control of a disease outbreak.
(f) Participate in the organisation of a project or campaign.
(g) Participate in a public communication/education exercise.
(h) Participate in drafting or enforcing some aspects of occupational health-related legislation.

6. **LEAVE**

During the training, a candidate must not take more than 14 days leave, per six-month posting including sick leave.

During the course no leave should be taken other than sick leave.

7. **LOG BOOK**

The log book will be given to the candidate at the beginning of the training when he registers with the Division. It should be reviewed regularly by his supervisor(s) and 6-monthly by the Director of the training programme or the Head of department. These records should be retained for the full duration of the training.

For overseas candidates, training will be reviewed on a case-by-case basis. Training will be recognized in those hospitals or institutions whose training programme, in the opinion of the Specialist Training Committee (STC), is equivalent to the requirements of the M. Med.
V EXAMINATION

To sit for the examination, a candidate must submit together with his application form, the log book and other relevant material to the Division for inspection.

1. DATE AND TIME

The examination is held each year (usually March) if there are sufficient candidates. Following successful completion of the examination, the candidate will be given three months (April to June) to submit a dissertation on a subject approved by the Chief Examiner.

2. VENUE

National University of Singapore and other venues that will be specified.

3. ELIGIBILITY

In order to be admitted to the examination, a candidate must –

(a) have held a medical qualification for at least 4 years; and

(b) have had one year general clinical experience following housemanship; and

(c) have had one year full-time experience in occupational medicine and/or public health; and

(d) have satisfactorily completed an approved academic course in Occupational Medicine/Health provided that this does not precede (c) above.

4. EXEMPTION(S)

Nil.
5. FORMAT OF EXAMINATION

(a) Written Examination - There will be three papers.
(b) Practical Examination - Practical examination in Occupational medicine.
(c) Clinical Examination - A clinical examination of patients.
(d) Oral Examination - An oral examination in any aspect of Occupational Medicine.
(e) Dissertation - On a subject approved by the Chief Examiner.

6. REQUIREMENTS TO PASS THE EXAMINATION

A candidate for the degree of Master of Medicine (Occupational Medicine) is required to pass an examination consisting of a written, a practical section, a clinical section and an oral section and submit a satisfactory dissertation.

7. COURSE AND EXAMINATION FEE (VALID UNTIL FURTHER NOTICE)

The course and examination fees are-

<table>
<thead>
<tr>
<th>Description</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Tuition Fee</td>
<td>S$10,400</td>
</tr>
<tr>
<td>Registration Fee</td>
<td>S$52.50 #</td>
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<tr>
<td>Student activity &amp; Services Fees</td>
<td>S$67.20</td>
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<td>Health &amp; Insurance</td>
<td>S$112.15</td>
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<td>Academic Related Fees</td>
<td>S$23.50</td>
</tr>
<tr>
<td>Examination Fee</td>
<td>S$315.00</td>
</tr>
</tbody>
</table>

**Total**  
S$ 10,970.35

#non-refundable

Please note that all fees are inclusive of 4% GST and are subject to change without prior notice.

For the full-time course, funds should also be obtained for a 1-week study visit to a neighbouring country, estimated at about S$1,200.00.
8. **WITHDRAWAL FROM EXAMINATION**

   (1) At the discretion of the Division, a candidate withdrawing from the examination may receive a full refund of the examination fee, excluding the registration fee of S$52.50, provided that such withdrawal is received in writing prior to the date on which entries close.

   (2) A candidate withdrawing an application on or after the closing date, or who fails to appear for an examination for which application has been accepted, may be refunded a proportion of the fee paid on production of medical or other compassionate grounds within seven (7) days of withdrawal or failure to appear.

   (3) The abovementioned regulation also applies when transferring to a subsequent examination.

9. **APPLICATION**

   (1) Applications to sit for the examination must be made on a form obtainable from the Secretary of the Division of Graduate Medical Studies, National University of Singapore, Blk MD5, Level 3, 12 Medical Drive, Singapore 117598.

   (2) The application form must be completed and returned to the Secretary before the closing date together with the entry fee, log book and other materials pertinent to the applicant.

10. **VERIFICATION**

    All candidates must realise that the above arrangements are under continual review and that it is their responsibility to check the current position with the Secretary of the Division.
VI ADVANCED TRAINING PROGRAMME

1. DURATION

In general, the training covers a minimum of 2 years culminating in a formal exit assessment. The training period will commence from the date of admission to the programme, without any backdating. Relevant pre-traineeship postings may be accredited as 6 months (maximum) basic training for the purpose of admission to all Advanced Training Specialties, provided the trainee has passed the M. Med (or equivalent) examination. The trainee may be allowed more than 6 months accreditation under special circumstances approved by the Board of Assessors.

2. ENTRY FOR TRAINING

The trainee must –
(a) have obtained a relevant graduate degree e.g. M. Med or equivalent;
(b) have successfully completed a recognized basic training programme of at least 3 years;
(c) be certified fit to commence on the advanced training programme by a recognized specialist in the field;
(d) submit two referee reports on his character and competence which have to be accepted by the Division;
(e) have been accepted by a recognized training institution for advanced training;
(f) have registered with the Singapore Medical Council.

3. PROCEDURE

Registration is necessary if time spent in training is to be approved. The following documents are required:
(a) copy of the graduate degree obtained. The original document has to be produced for verification;
(b) proof of completion of basic training to be certified by Heads of Departments concerned;
(c) certification of fitness to commence advanced training by a specialist in the field;
(d) two referee reports; and
(e) letter of acceptance of trainee by a recognized institution for advanced training.

4. WITHDRAWAL FROM TRAINING

(1) Should the trainee decide to withdraw from the advanced training programme that he has registered for, he should inform the Division in writing immediately.

(2) Where applicable, if notice of withdrawal is received by the Division at least four (4) weeks prior to the commencement of an assessment or interview that has been scheduled, for purpose of certification of
successful completion of the advanced training programme, full refund of the entry fee will be accorded.

(3) Partial refund may be given if notice of withdrawal is received after this date (i.e. 4 weeks prior to commencement of assessment/interview) or if the trainee fails to submit this notice provided the trainee produces medical or other evidence of compassionate grounds within seven (7) days of failure to appear for the assessment or interview.

(4) When transferring an application for registration for advanced training in another specialty, at least four (4) weeks notice in writing must be received by the Division prior to commencement of transfer.

(5) Notice of transfer must be given prior to the commencement of advanced training in another specialty.

5. RECIPROCITY

Holders of qualifications from the American Board Certificates, Canadian Fellowship, Specialty Fellowships of the UK and Australasian Colleges will be considered on a case-by-case basis. The content of the specialty training will have to be scrutinized, and the trainee will be subjected to the same exit assessment conducted for all candidates.

6. RECOGNISED BASIC QUALIFICATIONS

MMED (Occupational Medicine) (Singapore) (wef 1992)
MSc (Occupational Medicine) (Singapore) (1974-1991)
MSc (Occupational Medicine) (Singapore) (London)
DIH (London) (if obtained prior to end - 1987)
MFOM (London)
FFOM (London)
VII CONTENT OF TRAINING

1. ACCREDITED DEPARTMENTS

Training should normally be in accredited or approved training departments locally or overseas. In all other instances, applications will be considered on a case-by-case basis, but the supervisor must be from an accredited department.

2. SUPERVISORS

Supervisors will be appointed by the Specialist Training Committee (STC). They must monitor the 6-monthly progress of their trainees for the whole advanced training period. This would include active supervision and periodic evaluation of work done, problems encountered and related matters.

3. TRAINING ACTIVITIES

The following are some of the training activities that may provide the basis for supervisors to evaluate the trainees’ progress:

(a) Publication of scientific papers in refereed journals;
(b) Participation at overseas or local conferences, seminars and workshops, preferably with presentation of papers;
(c) Participation in journal club or other CME sessions. Some of these events could be organized by the University or Academy Chapter. Trainees should present papers and make case presentations, the latter, with emphasis on solutions and control strategies.
(d) Conducting of lectures;
(e) Attending relevant courses (e.g. on biostatistics, epidemiology, managed health care, toxicology, hygiene, health promotion, law and ethics).
(f) Attending lectures (e.g. on travel medicine, medical ethics, latest developments in the biomedical sciences, such as molecular epidemiology and genetics).
(g) Reading journal articles.
(h) Consultancy work relating to occupational medicine or occupational health matters in the workplace.
(i) Performing a literature search and writing a review on a health topic.
(j) Conducting and reporting on a situational assessment exercise.
(k) Conducting, analysing and reporting on a simple project.
(l) Writing a memorandum on a health topic.
(m) Participation in the investigation and control of a disease outbreak.
(n) Participation in the organisation of a project or campaign.
(o) Participation in a public communication/education exercise.
(p) Participation in drafting or enforcing some aspects of health-related legislation.
4. LOG BOOK

The log book will be handed to the candidate at the beginning of the training when he registers with the Division. It should be reviewed 6-monthly by the supervisor through the Head of department.

For overseas training, it will be reviewed on a case-by-case basis. Training will be recognized in those hospitals or institutions whose training programme, in the opinion of the STC, is equivalent to the requirements of the Division.

5. ASSIGNMENTS

Each year, the candidate is to submit in written form ONE project/assignment report for acceptance by the STC.

For the duration of the whole training period, the candidate is to publish in a refereed journal at least ONE first author paper on a public health topic.

VIII EXIT ASSESSMENT

1. FORMAT

In general, the assessment will be in four parts:

(a) Review of work and training of candidate according to submitted portfolio.
   The assessment panel may seek clarification or ask questions on the candidate's training experience.
   The candidate must demonstrate expertise in dealing with occupational medicine/occupational health (OM/OH) matters if consulted by managements.

(b) Discussion of one or two case(s) in occupational medicine / project(s) undertaken.
   The write up(s) will be prepared and made available to the assessment panel.

(c) Critique and discussion of one or two paper(s) in occupational medicine.
   The papers should preferably, but not necessarily, be on a topic related to the candidate's general area of work.
   The paper(s) should be given to the candidate at least a week before the assessment.

(d) General review of occupational medicine knowledge.
   This section is for the candidate to demonstrate expertise in a wide range of OM/OH. The candidate must show an ability to apply his/her knowledge and skills in various situations. He/she must also be able to discuss recent scientific developments in OM.
2. RESULT

A pass or fail mark will be awarded.

3. RE-ASSESSMENT

Candidates who fail the exit assessment will be re-assessed at a date to be fixed by the Board of Assessors.

4. BOARD OF ASSESSORS

The Board shall comprise three members of the STC in OM, or local examiners accredited by the STC. Where possible, an external assessor shall be included, who may be the M. Med (OM) external examiner or a visiting expert in OM.

5. EXIT CERTIFICATE

(1) Trainees who have satisfactorily completed the training will receive a certificate of participation issued by the Joint Committee for Specialist Training.

(2) Thereafter they may apply to the Singapore Medical Council for certification as a Specialist, and to the Academy of Medicine Singapore for their FAMS.

Updated on 15 December 2004