



MALAYSIAN MEDICAL COUNCIL

SPECIALTY-SPECIFIC REQUIREMENTS (SSR)

(ANATOMICAL PATHOLOGY)

Prepared By:

Specialty Education Subcommittee (SEC)
of the Medical Education Committee (MEC),
Malaysian Medical Council

Approved by the Malaysian Medical Council:

29th August 2024

Preface

1. The Specialty-Specific Requirements (SSR) pertain to requirements within each specialty and specify the minimum requirements pertaining to the training curriculum, trainers, educational resources and head of programme.
2. The Specialty-Specific Requirements (SSR) are intricately linked to the MMC Malaysian Standards for Medical Specialist Training 2019, and the Standards and SSR must be read and applied together.

Specialty-Specific Minimum Requirements for Training Curriculum (Based on Area 1.2.4 of Malaysian Standards for Medical Specialist Training) - Anatomical Pathology					
Specialty-Specific Requirements (Reference Standard)	Criteria				
1) Minimum entry requirements for postgraduate training (Standard 3.1.)	1. Fully registered with the Malaysian Medical Council with a current annual practicing certificate. 2. Successful entry evaluation into the programme.				
2) Minimum duration of training programme (Standard 1.2.4 - Table 2)	Completion of a minimum of 48 months of specialised training in the specialty programme.				
3) Structure of training (rotation/modules) Training overview Training rotation/modules and case mix (Standard 1.2.4 - Table 3 & Table 4)	The programme should have a clear pathway encompassing phases of training which shall include the basic and advanced components in Anatomical Pathology. <table border="1" style="margin-top: 20px; width: 100%;"> <thead> <tr> <th style="text-align: center;">Areas</th> <th style="text-align: center;">Minimum Duration (months)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Core areas of diagnostic histopathology (surgical</td> <td style="text-align: center;">36</td> </tr> </tbody> </table>	Areas	Minimum Duration (months)	Core areas of diagnostic histopathology (surgical	36
Areas	Minimum Duration (months)				
Core areas of diagnostic histopathology (surgical	36				

	pathology), and diagnostic cytopathology)	
	<p>Relevant training (non-mandatory) in areas which may enhance anatomical pathology practice, such as, but not limited to haematology, medical microbiology, chemical pathology, autopsy pathology, molecular pathology, digital pathology, laboratory techniques, laboratory management and research.</p>	12
*Effective learning period per year or 12 months is 48 weeks		
<p>4) Assessments (Standard 2.2.1)</p>	<p>Assessments should</p> <ul style="list-style-type: none"> i. Employ appropriate methods and levels that are well-aligned with learning outcomes. These include a variety of methods and tools such as written assessments, clinical assessments, supervisor’s report, logbook, attendance, training attended, practice diary, research report, communication skills including methods appropriate to assess ethics and professionalism. ii. Include formative and summative assessments throughout each rotation, semester, or year of study. iii. Include clear criteria for progression to next year of study. iv. Include an exit evaluation/assessment. 	
<p>5) Additional requirements for completion of training (Standard 1.2.4)</p>	<ul style="list-style-type: none"> i. Completion of graduate-level research or clinical audit project. 	
<p>6) List of competencies to be acquired upon</p>	<p><u>Generic competencies</u></p> <p>Able to:</p>	

completion of
training

(Standard 1.1.4)

- i. Diagnose, investigate and manage common anatomical pathology cases whilst considering social, health economics and preventive aspects
- ii. Anticipate and manage complications in the laboratory diagnostic services
- iii. Work independently and in teams competently and professionally
- iv. Practice good ethical conduct
- v. Practice good and effective communication skills
- vi. Perform critical review, plan and conduct scientific research
- vii. Exemplify self-advancement through continuous academic and/or professional development including digital health
- viii. Apply evidence-based medicine in the field of anatomical pathology
- ix. Demonstrate exemplary leadership qualities in the multi-disciplinary team management of anatomical pathology cases
- x. Demonstrate an entrepreneurial mindset, creative problem-solving and resilience

Specific specialty competencies

- i. Manage tissue specimens for histopathology, including grossing, microscopy and the appropriate use of ancillary tests (e.g. histochemistry, immunohistochemistry, in-situ hybridization, molecular tests)
- ii. Report histopathology findings
- iii. Manage and report frozen section findings
- iv. Report cytopathology findings
- v. Perform fine needle aspiration
- vi. Critically evaluate and discuss diagnostic anatomic pathology with healthcare providers involved in patient care.
- vii. Conduct clinical audit and quality assurance activities to improve anatomical pathology laboratory services.
- viii. Identify occupational health hazards and safety requirements for the safe provision of anatomical pathology laboratory services.
- ix. Critically evaluate research findings and to contribute towards medical research, education and training in anatomical

	pathology.
--	------------

Note: These criteria represent the minimum standards. Each educational programme provider may exercise their autonomy to state criteria above and beyond these minimum standards.

Specialty-Specific Minimum Requirements for Training Centres and Head of Programme (Based on Areas 3-6 of Malaysian Standards for Medical Specialist Training) - Anatomical Pathology										
Item No	Specialty-Specific Requirements (Reference Standard)	Criteria								
4	Trainer-to-trainee ratio (Standard 3.1.3)	1 : 4								
5	Minimum qualifications and experience of trainers (Standard 4.1.2)	<ul style="list-style-type: none"> i. Registered with National Specialist Register. ii. Completed training-of-trainer course/equivalent 								
6	Minimum requirements for educational resource (Standard 5.1.1)	<p>The diagnostic facilities and equipment requirement of the programme training centres must collectively be able to accommodate the following minimum requirement:</p> <ul style="list-style-type: none"> i. Physical facilities: <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Physical facilities</th> </tr> </thead> <tbody> <tr> <td>Seminar/ tutorial rooms</td> </tr> <tr> <td>Trainee workspace</td> </tr> <tr> <td>Computers and internet facilities</td> </tr> <tr> <td>Library of reference books or journals (physical and/or virtual)</td> </tr> </tbody> </table> ii. Service areas: <p>The laboratory(ies) must be accepted or approved by relevant body(ies)* for diagnostic anatomical pathology laboratory or equivalent services.</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Services</th> </tr> </thead> <tbody> <tr> <td>Laboratory information system and a case-indexing system (eg. SNOMED or ICD-10.)</td> </tr> <tr> <td>Use of histochemical, immunohistochemical and immunofluorescence stains.</td> </tr> </tbody> </table> 	Physical facilities	Seminar/ tutorial rooms	Trainee workspace	Computers and internet facilities	Library of reference books or journals (physical and/or virtual)	Services	Laboratory information system and a case-indexing system (eg. SNOMED or ICD-10.)	Use of histochemical, immunohistochemical and immunofluorescence stains.
Physical facilities										
Seminar/ tutorial rooms										
Trainee workspace										
Computers and internet facilities										
Library of reference books or journals (physical and/or virtual)										
Services										
Laboratory information system and a case-indexing system (eg. SNOMED or ICD-10.)										
Use of histochemical, immunohistochemical and immunofluorescence stains.										

Ancillary techniques such as in-situ hybridization, and molecular testing

iii. Equipment:

Equipment

Teaching facilities:

- i. Dual-viewing or multi-headed microscopes
- ii. Computer with internet facility
- iii. Microscope-linked or digital image projection for multidisciplinary team discussions

Diagnostic laboratories:

- i. Cut-up stations
- ii. Biosafety cabinets (at least BSC-2)
- iii. Tissue processor
- iv. Microtomes
- v. Cryostat microtome
- vi. Centrifuges and cytocentrifuges
- vii. Automated or manual staining equipment

iv. Case load:

The case load of the programme training centres must **collectively** be able to accommodate the following minimum requirements:

Areas	Minimum Quantity (cases/trainee/year)
Surgical pathology with frozen sections	500 Surgical Histopathological Examination (HPE) including 12 frozen sections
Gynaecology cytology	100
Non-gynaecology cytology	100
Fine needle aspiration	25

		v. Case mix:						
		<table border="1"> <thead> <tr> <th>Areas</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td> <p>Histopathology</p> <p>(The practice shall include the use of histochemical and immunohistochemical stains, and other ancillary techniques or testing where applicable)</p> </td> <td> <p>i. Both tumour and non-tumour pathology from both adults and paediatric patients</p> <p>ii. Common organ-specific pathology such as, but not limited to, breast, gastrointestinal, genital tract, haematolymphoid, lung, renal, liver, skin, nervous system head and neck and musculoskeletal pathology</p> </td> </tr> <tr> <td> <p>Cytopathology</p> <p>(The practice shall include liquid-based cytology and the use of cell-blocks)</p> </td> <td> <p>i. Gynaecological and non-gynaecological cytology</p> <p>ii. Fine needle aspiration cytology</p> </td> </tr> </tbody> </table>	Areas	Details	<p>Histopathology</p> <p>(The practice shall include the use of histochemical and immunohistochemical stains, and other ancillary techniques or testing where applicable)</p>	<p>i. Both tumour and non-tumour pathology from both adults and paediatric patients</p> <p>ii. Common organ-specific pathology such as, but not limited to, breast, gastrointestinal, genital tract, haematolymphoid, lung, renal, liver, skin, nervous system head and neck and musculoskeletal pathology</p>	<p>Cytopathology</p> <p>(The practice shall include liquid-based cytology and the use of cell-blocks)</p>	<p>i. Gynaecological and non-gynaecological cytology</p> <p>ii. Fine needle aspiration cytology</p>
Areas	Details							
<p>Histopathology</p> <p>(The practice shall include the use of histochemical and immunohistochemical stains, and other ancillary techniques or testing where applicable)</p>	<p>i. Both tumour and non-tumour pathology from both adults and paediatric patients</p> <p>ii. Common organ-specific pathology such as, but not limited to, breast, gastrointestinal, genital tract, haematolymphoid, lung, renal, liver, skin, nervous system head and neck and musculoskeletal pathology</p>							
<p>Cytopathology</p> <p>(The practice shall include liquid-based cytology and the use of cell-blocks)</p>	<p>i. Gynaecological and non-gynaecological cytology</p> <p>ii. Fine needle aspiration cytology</p>							
7	<p>Minimum qualifications and experience of Head of Programme</p> <p>(Standard 6.2.2)</p>	<p>i. 5 years or more of working experience after national specialist registration.</p> <p>ii. Experience in administration and/or academic management.</p>						

Note: These criteria represent the minimum standards. Each educational programme provider may exercise their autonomy to state criteria above and beyond these minimum standards.

Glossary for Lab Based

*Relevant body(ies) refers to Department of Standards Malaysia, SIRIM and etc.

ACKNOWLEDGEMENT

Authors:

Specialty Education Subcommittee (SSC) Edu Anatomical Pathology 2022 – 2024

1. Prof. Ulung Datuk Dr. Looi Lai Meng (Chair)
2. Datin Dr. Kalavathy A/P Ramachandram
3. Dr. Lee Bang Rom
4. Dr. Noraini Bt Mohd Dusa
5. Dr. Salmi Bt Abdullah
6. Dr. Arni Bt Talib
7. Dr. Noraidah Bt Masir

Specialty Education Subcommittee (SSC) Edu Anatomical Pathology 2024 – 2026

1. Dr. Salmi Bt Abdullah
2. Datin Dr. Kalavathy A/P Ramachandram
3. Prof. Dr. Reena Rahayu Md Zin
4. Prof. Madya Dr. Maizatun Atmadini Abdullah
5. Dr Farveen Marican Abu Backer Maricar

Editors:

Medical Education Committee (MEC)

1. Prof. Datuk Dr. Rohaizat Bin Yon (Chair)
2. Prof. Dato' Dr. Mafauzy bin Mohamed
3. Prof. Dr. Zaleha Abdullah Mahdy
4. Prof. Datin Dr. Yong Rafidah binti Abdul Rahman
5. Prof. Dr. G. R. Letchuman Ramanathan
6. Dato' Dr. Jiffre bin Din
7. Dato' Dr. Jafri Malin bin Abdullah
8. Prof. Dr. Azad Hassan Bin Abdul Razack
9. Prof. Dato' Dr. Yang Faridah binti Abdul Aziz
10. Dr. Sri Wahyu Binti Taher
11. Prof. Dr. Sharifah Sulaiha Binti Syed Aznal
12. Prof. Dr Shatriah Binti Ismail
13. Prof. Dr. Lee Way Seah
14. Dr. Rafidah Binti Abdullah

Specialty Education Subcommittee (SEC)

1. Prof. Dr. G. R. Letchuman Ramanathan (Chair)
2. Prof. Dr. Roslina Abd Manap
3. Dr. Hirman bin Ismail
4. Prof. Dr. Jamiyah binti Hassan
5. Prof. Dr. Nazimah Idris
6. Dr. Giri Shan
7. Dr. Hanif Hussein
8. Prof. Madya Dr. Bahiyah Abdullah
9. Datuk Seri Dr. Paras Doshi