

Iraqi Council of Medical Specialization

Scientific Council of Pathology

Histopathology and Cytopathology Curriculum – 2024-2025

1. Introduction

The histopathology and cytopathology training curriculum is designed to prepare medical professionals in the diagnosis of disease through tissue and cellular examination. This program integrates theoretical foundations with practical competencies to ensure comprehensive, structured, and high-standard training.

2. Purpose

Purpose Statement:

To prepare trainees for the award of the *Certificate of Completion of Training (CCT)* and the Fellowship of the Iraqi Council of Medical Specialization, Scientific Council of Pathology.

High-Level Outcomes:

Trainees will develop *Capabilities in Practice (CiPs)* encompassing core professional responsibilities and diagnostic tasks aligned with national and international standards.

3. Training Pathway

- **Duration:** 4 years (full-time).
- **Entry Requirements:** MBChB degree or equivalent, with successful completion of foundational medical training.
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4. Learning and Teaching

- **Teaching Methods:**
Lectures, seminars, practical workshops, supervised laboratory and clinical rotations.
- **Learning Methods:**
Self-directed study, case-based discussions, literature reviews, and research involvement.

5. Core Knowledge Areas

Domain	Description
Cellular Pathology	Study of normal and abnormal cellular and tissue architecture.
Systemic Pathology	Pathological conditions of organ systems.
Molecular Pathology	Techniques for analyzing DNA, RNA, and protein relevant to disease states.

6. Practical Skills

- Microscopic interpretation of histological and cytological preparations.
- Grossing techniques and tissue processing.
- Use of histochemical stains and immunohistochemistry.
- Molecular diagnostics including PCR, FISH, and NGS.
- Digital pathology and telepathology systems.

7. Assessment Methods

- **Supervised Learning Events (SLEs):** Case-based discussions, direct observation, and multi-source feedback.
- **Workplace-Based Assessments (WPBAs):** Continuous professional and technical skills evaluation.
- **Formal Examinations:** Written theory and practical/oral assessments.

8. Specialized Training Opportunities

- **Independent Reporting:** Progressive responsibility in diagnostic case sign-out.
- **Subspecialty Exposure:** Neuropathology, dermatopathology, gynecologic pathology, forensic pathology, and pediatric pathology.

9. Professional Development

- **Ethics and Professionalism:** Emphasis on confidentiality, integrity, and medical ethics.
- **Research and Innovation:** Encouragement to participate in academic writing, presentations, and research projects.

10. Quality Assurance

- Regular curriculum review and benchmarking against international standards.
- Trainee and faculty feedback loops to ensure continuous improvement.

11. Equality and Diversity

- Equal access to training and assessment.
- Support mechanisms for trainees with special educational or personal needs.

Yearly Training Breakdown

Year 1: Core Histopathology Training

Component	Theoretical Content	Practical Skills
Surgical Pathology	Specimen handling, grossing, microscopic evaluation	Grossing, processing, diagnosis
Systemic Pathology	Pathology of all organ systems	Slide review and case correlation
Cytopathology	Cervical and non-cervical cytology principles	Smear preparation and interpretation
Molecular Pathology	PCR, FISH, NGS, and molecular diagnostics	Basic molecular techniques, interpretation
Digital Pathology	Introduction to telepathology and image analysis	Use of scanning systems and image interpretation tools

Year 2: Advanced Diagnostic Techniques

Component	Theoretical Content	Practical Skills
Special Stains	PAS, GMS, Ziehl-Neelsen, Masson's Trichrome	Technique application and interpretation
Immunohistochemistry	Antibody panels, protocols, diagnostic use	Antibody selection, staining, scoring
Electron Microscopy	Ultrastructural features, sample prep	Sample fixation and reading EM images
Subspecialties (e.g. Neuropathology, Dermatopathology, Pediatric, GYN)	Disease-specific morphology and diagnosis	Integrated diagnosis, use of ancillary tests

Year 3: Research and Clinical Integration

- **Rotations:** Rotating through major pathology departments with case responsibility.
- **Research Project:** Supervised, hypothesis-driven research with required presentation or publication.
- **Case Discussions and Seminars:** Weekly participation in departmental academic meetings.
- **Autopsy Pathology:** Ethical, procedural, and diagnostic aspects of postmortem exams.
- **FNAC and Core Biopsy:** Technique, patient communication, cytodiagnosis, and triaging.

Year 4: Consolidation and Specialization

- **Independent Reporting:** Final-year supervised sign-out and workload simulation.
- **Advanced Research:** Manuscript writing, conference presentations.
- **Mentoring and Teaching:** Undergraduate and junior trainee education.
- **Case Discussions:** Trainee-led sessions on complex or rare cases.

Log Book

A structured **Log Book** is mandatory throughout training to document:

1. Personal and Academic Information

Trainee name, supervisor, training site, dates.

2. Clinical Experience

Patient age, gender, diagnosis, procedures, histological findings, trainee reflections.

3. Research Activity

Project title, objectives, methodology, progress, supervisor input.

4. Professional Development

Workshops, conferences, learning outcomes, practical application.

5. Supervisor Feedback

Progress review, feedback summaries, action plans.

6. Self-Assessment

Skills checklist, confidence levels, improvement notes.

Portfolio

The **Trainee Portfolio** complements the logbook and serves as evidence of progression.

Contents:

- Curriculum vitae and identity documents.
- Rotation summaries and evaluation forms.
- Case presentations and academic outputs.
- Certificates of participation in workshops and courses.
- Research output and publication drafts.
- Peer and supervisor feedback.

Functions:

- **Assessment Tool:** Tracks competency attainment.
- **Reflection Medium:** Encourages self-directed improvement.
- **Documentation Archive:** Regulatory and certification proof.
- **Presentation Resource:** Useful for job applications and fellowships.

12. Examination Program

The examination framework for the Histopathology and Cytopathology Training Program is structured to assess the progressive acquisition of knowledge, diagnostic skills, professional behavior, and research capabilities. It ensures competency for independent practice upon graduation.

12.1 Examination Structure

Stage	Type	Purpose	Timing
Entry Assessment	Written/Interview	Selection into the program based on baseline knowledge	Prior to Year 1
Formative Exams	MCQs, Spotters, Case-based	Continuous self-assessment, feedback for improvement	End of each academic year
Mid-Training Exam	Written + Practical OSPE/OSCE	Evaluation of applied knowledge and histological skills	End of Year 2
Final Exit Exam	Written + Practical + Viva	Comprehensive assessment for certification and fellowship	End of Year 4

12.2 Examination Components

a. Written Examinations

- **Format:** Single-best-answer (SBA), multiple-choice questions (MCQs), short essay questions (SEQs), data interpretation.
- **Coverage:** Cellular pathology, systemic pathology, molecular diagnostics, cytology, immunohistochemistry, research methodology.

b. Practical/Slide-Based Examination

- **Histopathology:** Glass slide or digital slide interpretation.
- **Cytopathology:** Smear reading and reporting.
- **Special Stains/IHC/Molecular Tests:** Interpretation and clinical correlation.

c. Viva Voce (Oral Examination)

- **Content:** Diagnostic reasoning, differential diagnosis, pathology reporting, handling difficult cases, laboratory quality control.
- **Panel:** Conducted by certified examiners including subspecialists.

e. forensic medicine practical examination:

As part of the final-year assessment, candidates will undergo a ****Practical Forensic Medicine Exam**** to evaluate their ability to handle medico-legal specimens, document forensic findings, and prepare structured forensic pathology reports.

****Components**

Medico-Legal Autopsy Case: Gross examination and documentation of forensic cases.

Injury Pattern Interpretation: Analysis of injury mechanisms and related forensic significance.

Forensic Toxicology and Evidence Handling: Proper sampling, chain of custody, and toxicology report interpretation.

Legal Testimony Simulation: Oral questioning to assess candidate's ability to communicate forensic findings in a courtroom setting.

Purpose:

To ensure graduates have basic competency in forensic pathology principles relevant to histopathology practice.

12.3 Assessment Criteria

Domain	Weightage
Theoretical Knowledge	50% should pass this stage to continue the practical exams
Practical Diagnostic Skills	50 % in total
Professionalism & Ethics slides examination	Included in practical skill
Communication & Reporting 50%	
Oral examination: 30%	
Forensic medicine skills 20%	Included in practical skill

Pass Mark: Minimum 60% in each component (subject to annual review by the Examination Board). And the passing mark is 70%

12.4 Research Thesis Defense (Year 4)

- **Requirement:** Each candidate must submit and defend a supervised research project.
- **Evaluation:** Internal and external assessors evaluate the scientific merit, methodology, analysis, and presentation.

12.5 Certification

Candidates who successfully complete all assessment components, logbook verification, portfolio review, and thesis defense will be awarded:

Certificate of Completion of Training (CCT)

Fellowship of the Iraqi Council of Medical Specialization – Pathology