

Specialty Training Guide

Clinical Training Program

A General Model Applicable to All Medical Specialties and Disciplines

First Edition — Subject to Periodic Review

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How to use this guide: This is a general, reference model for building specialist training programs, used by trainees, supervisors, and program coordinators as a unified reference.

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1. Executive Summary of the Program

The training program in a specialty is defined as a comprehensive, systematic training program based on Competency-Based Medical Education (CBME), with a duration of [4-6] years (mandatory years followed by an elective year where applicable). It qualifies applicants who meet the admission requirements to become competent specialists in the field, capable of diagnosing and managing the relevant conditions in accordance with the latest scientific standards.

The program is founded on the scientific method and Evidence-Based Medicine, and on humanistic values and professional ethics in dealing with patients and their families, ensuring safe, patient-centered care. Its content is designed to keep pace with scientific developments in the diagnostic and therapeutic tools relevant to the specialty.

The trainee (resident) enrolls in an accredited training centre within its capacity, under the supervision of the program director and the Clinical Competency Committee (CCC), and undergoes continuous formative assessment using multiple workplace-based assessment tools. The trainee completes a scientific research project as a graduation requirement, then sits for the final assessment in its two components — cognitive and practical. Upon fulfilling all requirements, the specialty certificate is awarded.

Approved Admission Pathways

- 1. Standard training pathway:** After fulfilling the prior academic qualification required for entry into the specialty (or its equivalent), the trainee completes the prescribed mandatory training years, with or without the elective year.
- 2. Pathway for accrediting training obtained outside the awarding body:** Approved according to the awarding body's regulations and the conditions for equating prior training.

2. Graduate Competencies and Attributes

The program adheres to the approved competency model as a framework governing learning outcome, assessment tools, and developmental milestones. The graduate is expected to demonstrate mastery of the following competencies:

1. **Patient Care:** Providing compassionate, appropriate, and effective care to patients; including history taking, clinical examination, formulating diagnostic and therapeutic plans, and safely and competently performing specialty-specific interventions.
2. **Medical Knowledge:** Possessing a firm knowledge of the basic and clinical sciences relevant to the specialty, and applying this knowledge in clinical practice.
3. **Practice-Based Learning & Improvement:** Appraising one's own practice in light of scientific evidence, participating in quality improvement projects, engaging in continuous self-directed learning, and benefiting from feedback.
4. **Interpersonal & Communication Skills:** Communicating effectively with patients, families, and members of the healthcare team, delivering difficult news with compassion, and maintaining accurate medical documentation.
5. **Professionalism:** Commitment to responsibility, integrity, confidentiality, and respect for diversity, and adherence to ethical principles in diagnosis, treatment, and research.
6. **Systems-Based Practice:** Awareness of the healthcare context, coordination of care within multidisciplinary teams, optimal use of resources, and contribution to patient safety.

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3. Admission Requirements for Program Registration

The general admission requirements set out in the awarding body's academic affairs regulations apply, in addition to the following specific requirements, which the applicant must fully satisfy prior to registration:

- Physical and psychological fitness necessary to practice the specialty.
- Obtaining the prior academic qualification required for entry into the specialty, or its equivalent, in accordance with the approved admission pathways.
- Proof of registration in a training centre accredited by the awarding body, within its capacity.
- Proof of the right to practice medicine or passing the approved licensing examination in the member state.
- Fulfilling any additional specific requirements determined by the scientific council of the specialty.
- Submitting the registration application together with the required documents within the specified deadlines.
- Payment of the prescribed fees in accordance with the awarding body's regulations.

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4. Program Accreditation Standards and Requirements

The awarding body's general standards for the accreditation of training centers apply, in addition to the specialty-specific requirements set out in the following table, which must be available in the training center as part of the program accreditation requirements:

Requirement Item	Description
Program Director	A physician holding advanced qualifications in the specialty with no less than ten years of experience, with experience in training resident physicians and a record of scientific research, able to allocate sufficient time to manage and supervise the program.
Minimum Qualified Trainers	A sufficient number of qualified trainers, including the program director and at least two additional trainers holding advanced qualifications in the specialty and experienced in training resident physicians.
Support Staff	Qualified nursing, technical, and support staff appropriate to the nature of the specialty and sufficient to support clinical and training services.
Administrative Resources	Administrative assistants and adequate secretarial support for the training process and documentation.
Number of Beds & Occupancy Rate	The minimum number of beds appropriate to the specialty, with a clinical occupancy rate of no less than [specified rate]%.
Clinics & Support Services	Outpatient clinics and specialized supporting services relevant to the specialty.
Minimum Case Load	A specified minimum number of diverse new cases per year to ensure sufficient and varied clinical exposure.

Requirement Item	Description
Imaging & Radiology Services	The diagnostic imaging services required for the specialty, as determined by the scientific council.
Laboratory Services	The laboratory and diagnostic services required for the specialty.
Required Departments & Specialties	The supporting departments and specialties relevant to the training pathway (e.g., intensive care, emergency, laboratories, pharmacy, and others as appropriate to the specialty).
Other Services & Facilities	Medical records, medical statistics, a library, internet service, and the essential facilities required for training.
Preferred Standards	Advanced services and units that are preferably available to enrich training according to the nature of the specialty.

5. Training Capacity Calculation Mechanism

The training capacity of the center is calculated based on the number of beds and the number of qualified full-time trainers, so as to ensure the quality of supervision and training. The basic rule is that the number of trainees must be proportionate to the available training resources, such that the number of trainees does not exceed the center's capacity for adequate supervision:

Number of Beds	Minimum Full-Time Trainers	Capacity (trainees/year)	Trainer-to-Trainee Ratio
[determined by the council]	[determined by the council]	[calculated per the rule]	No more than one trainee per full-time trainer per training year

The number of patients should be proportionate to the number of trainees to ensure sufficient clinical exposure, and the ratio of trainees per full-time trainer must not exceed the maximum limit set in the awarding body's general standards. The center's training committee periodically reviews the training capacity in line with the available resources.

6. Training Curriculum (Content)

The curriculum covers the main domains of knowledge, practical skills, and behaviors that trainees must master, organized under the core competencies and then progressively distributed across the training years. The trainee undergoes daily assessment by the supervising consultant physician.

6.1 Organization of Content Under the Competencies

Patient Care: Diagnosing and managing conditions related to the specialty, applying approved treatment plans, performing specialty-specific interventions, managing inpatients, and providing consultations.

Medical Knowledge: The relevant basic and clinical sciences, the supporting diagnostic tools, and the approved therapeutic protocols.

Communication Skills & Professionalism: Ethical dealings with patients and their families, adherence to clinical guidelines and ethical standards in diagnosis and treatment and working within a multidisciplinary team.

Practice-Based Learning & Scientific Research: Participation in conducting medical research, attending continuing medical education activities, self-directed learning, and keeping up to date with developments in the specialty.

6.2 Expected Competencies for Each Training Year

Training follows the ACGME model of competency-based medical education: outcomes in every year map to the six Core Competencies — **Patient Care and Procedural Skills, Medical Knowledge, Practice-Based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, and Systems-Based Practice** — and progress is measured against specialty Milestones rated from Level 1 (entering resident) to Level 5 (expert), with Level 4 as the

graduation target. A Clinical Competency Committee (CCC) reviews each trainee's milestone ratings every six months.

The Early Years (Mandatory — PGY-1 and PGY-2; expected Milestones Level 1 → 3): During these, the trainee acquires the theoretical and practical foundations of the specialty in accredited centers according to the programs set by the scientific council, under direct then indirect supervision. Expected competencies include (to be detailed according to the specialty):

- Mastering the foundations and basic sciences relevant to the specialty (*Medical Knowledge*).
- Mastering the supporting diagnostic tools and tests and interpreting their results (*Patient Care; Medical Knowledge*).
- Diagnosing and managing common conditions under appropriate supervision (*Patient Care*).
- Recognizing the approved treatment protocols and their complications and toxicity (*Medical Knowledge; Patient Care*).
- Safely performing the basic interventions specific to the specialty (*Procedural Skills*).
- Managing inpatients and providing initial consultations, with safe documentation and handovers (*Patient Care; Communication; Systems-Based Practice*).

The Core Training Year (PGY-3; expected Milestones Level 3 → 4): During this, the trainee acquires the advanced practical skills of the specialty in accredited centers according to the programs set by the scientific council: management of complex and multi-system cases, advanced procedures, definitive consultations, supervision and teaching of junior residents, and participation in quality improvement and patient safety. Expected competencies include (to be detailed according to the specialty).

The Final Year (Elective — PGY-4; graduation at substantially Level 4 across all competencies): The trainee assumes senior/chief responsibility, running the service with oversight, and gains in-depth experience in one of the advanced subspecialty areas according to their orientation and the available resources, for example:

1. Advanced subspecialty area (A) relevant to the specialty.
2. Advanced subspecialty area (B) relevant to the specialty.
3. The field of research and advanced applications in the specialty.

6.3 Training Plan

- Periodic follow-up of the outpatient clinic and inpatient wards according to the nature of the specialty, including a longitudinal continuity clinic maintained across all four years.
- Specialized training rotations inside and outside the center (laboratory, subspecialty, or supporting, according to the specialty), each mapped to the six Core Competencies and their Milestones.
- Rotations in relevant units and centers, research and quality-improvement training, and elective training concentrated in the final year.

The trainee works alongside the specialist, and both share responsibility for supervising patients and training students and resident physicians who rotate periodically; supervision decreases progressively as milestone ratings advance. The trainee undertakes the following, each assessed through workplace-based assessment (direct observation, end-of-rotation evaluations, procedure logs, multisource feedback) and the annual in-training examination:

- Evaluating the biological and clinical variations of different conditions.
- Understanding the mechanism of action of treatments and their toxicity and complications.
- Understanding the course of the disease and the complications of treating or not treating it.
- Recognizing the treatment protocols approved in the specialty.
- Diagnosing conditions and determining their stages.
- Providing consultations in diagnosis and treatment.
- Managing inpatients and, in the final year, running the inpatient service.

7. Training Schedule (Rotation Matrix)

The following table shows an indicative training distribution (in months) for the four training years (PGY-1 to PGY-4), each totalling twelve months. The elective months of the final year are devoted to one of the advanced areas set out above:

Training Area / Specialty	Year 1	Year 2	Year 3	Year 4	Total
Core clinical rotation and consultation services	8	7	6	4	25
Laboratory / diagnostic rotation	1	—	1	—	2
Subspecialty rotation (A)	1	2	—	—	3
Subspecialty rotation (B)	—	2	1	—	3
Rotation in a relevant advanced unit	—	—	2	1	3
Intensive Care	1	1	—	—	2
Supporting / auxiliary rotation	1	—	1	—	2
Research / quality-improvement block	—	—	1	1	2
Elective (advanced pathway, final year)	—	—	—	6	6
Total (months)	12	12	12	12	48

Notes on the Rotation Matrix

- The elective months of the final (PGY-4) year are devoted to one of the advanced pathways approved in the specialty.
- A degree of overlap and flexibility between training years is permitted according to the trainee's needs and the availability of rotations, provided the required competencies are achieved.
- Rotations are linked to the competency matrix and the ACGME developmental Milestones; the Clinical Competency Committee reviews each trainee's aggregated evidence semi-annually and recommends promotion, targeted coaching, or remediation.
- Promotion to each year requires the expected milestone range for that year; graduation requires substantially Level 4 across all six

competencies and program director attestation of readiness for unsupervised practice.

- All rotations comply with duty-hour, supervision, and learning-environment requirements in the spirit of the ACGME common program requirements.
- Training agreements may be concluded with other accredited centers to cover specialized rotations inside or outside the country when needed, using the same assessment forms.

8. Training, Teaching Methods, Activities and Courses

8.1 Training Methods

- Regular clinical rounds on inpatients, with daily assessment by the supervising consultant physician.
- Performing the medical interventions specific to the specialty, documenting them in the logbook according to a clear follow-up mechanism.
- An on-call schedule ensuring multiple levels of supervision, with a maximum determined by the center in line with the awarding body's regulations.
- Assigning a responsible supervisor to each trainee to follow up their scientific and professional progress.
- Allocating at least half a day per week to organized scientific and educational activity.

8.2 Regular Educational Activities

- Case presentations and theoretical lectures.
- Multidisciplinary team meetings.
- Journal Club sessions.
- Clinical audit and research meetings.
- Scientific conferences, and Morbidity & Mortality meetings.
- Grand Round and specialized scientific seminars.
- The scientific lecture series approved by the awarding body.

8.3 Approved Complementary / Foundational Courses

The trainee completes the following foundational courses as part of the qualification requirements:

- Research Methodology.
- Basic and Advanced Life Support (BLS / ACLS) and their equivalents according to the specialty.
- Emergency and intensive care basics, and the foundational courses relevant to the specialty.
- Medical Ethics and Patient Safety.
- Communication Skills.

9. Academic and Practical Logbook

The trainee documents in the academic and practical logbook all of their clinical, procedural, and scientific activities in accordance with the training program content, to serve as a tool for tracking progress toward the targeted competencies. The logbook includes, in particular:

- The clinical cases the trainee has followed up in the wards, outpatient clinics, and consultations.
- The procedures and interventions performed, with the level of supervision indicated.
- Scientific activities: case presentations, journal club sessions, conferences, and participations.
- Research output: publishing at least one scientific article, and participating with scientific work in national and international conferences.

Notes on the Logbook

- Completion of the logbook begins in the first year, and its satisfactory completion is a condition for progressing to the following year.
- A gradation in the scientific and supervisory level of skills across the training years is observed (from performing under direct supervision to independence).
- The logbook is reviewed periodically by the supervisor, and its completion is a condition for eligibility to sit the final examination.

10. Scientific Research

Completion of the scientific research project is a graduation requirement. This component is organized as follows:

First: General Objectives. Developing critical thinking, research skills, and problem-solving in the trainee, and enabling them to contribute to the dissemination of knowledge and to participate actively in scientific research.

Second: Accepted Types of Research.

- Original Research.
- Systematic / Narrative Reviews, in accordance with PRISMA guidelines.
- Quality Improvement projects, in accordance with the PDSA methodology.

Third: Preparation Requirements.

- Selecting an appropriate research topic of clinical relevance.
- Obtaining the approval of the research ethics committee (IRB) before commencing data collection.
- Preparing the research proposal and having it approved.
- Collecting and statistically analyzing the data.
- Writing the research according to the approved scientific structure (Introduction, Methodology, Results, Discussion, Conclusion, References).

Fourth: Presentation Mechanism. The research is presented orally accompanied by a PowerPoint presentation before the assessment committee, with the trainee encouraged to publish it in a peer-reviewed scientific journal.

Fifth: Research Evaluation. The research is evaluated according to the following criteria table out of one hundred marks, with a pass mark of 70%:

Evaluation Criterion	Marks
Importance and relevance of the topic	20
Clarity of objectives	10
Design and methodology	20
Analysis of results	15
Oral presentation	15
Adherence to research ethics	10
Quality of scientific writing	10
Total (pass mark 70%)	100

Sixth: Procedures and Timeline. The research proposal is prepared in the first year, and is implemented and completed in the second year. Completion of the research and participation in at least one scientific work during the training period is required as a condition for entry to the final cognitive examination.

11. Recommended Courses and References

The scientific references approved for the specialty are adopted as the basis for study, with the possibility of updating them with the latest editions and taking into account the references of each member state. The following are recommended:

- The core reference books approved in the specialty (latest editions).
- The approved diagnostic and classification references relevant to the specialty.
- The up-to-date international clinical practice guidelines issued by specialized scientific societies and bodies.
- The peer-reviewed scientific journals relevant to the specialty.

12. Measurement and Assessment Methods

12.1 Continuous / Formative Assessment

The program adopts Workplace-Based Assessment using multiple tools, in addition to annual promotion assessments and reviews by the clinical competency committees:

- Mini Clinical Evaluation Exercise (Mini-CEX).
- Direct Observation of Procedural Skills (DOPS).
- Case-Based Discussion (CBD).
- Multi-Source Feedback (MSF / 360° feedback).
- Record reviews, clinical encounters, and teaching skills.
- Clinical Competency Committee (CCC) review twice a year using the milestones.
- Annual promotion examination: a single paper of multiple-choice questions (MCQ).

12.2 Summative Assessment

- Final cognitive examination: a single paper of multiple-choice questions (MCQ).
- Final practical examination: Objective Structured Clinical Examination (OSCE) stations, in addition to the clinical and laboratory assessment according to the specialty.

Sitting the examinations is contingent upon fulfilling the training requirements, completing the practical logbook, and completing the scientific research project. Examinations are held on their scheduled dates via the approved electronic examination platform, and the pass criteria are calculated in accordance with the awarding body's regulations. A final general examination is conducted covering the cognitive component (written theoretical) and the practical component (clinical and laboratory), with a clinical assessment at the end of the final year according to the elective pathway.

13. Program Review and Improvement Mechanism

Purpose: To conduct a periodic review of the efficiency of the program's design, implementation, and outcomes, ensuring its quality and continuous development in accordance with the awarding body's system.

Scope of Review: Objectives, curriculum, clinical distribution, rotations, educational activities, supervision, assessment tools, and outcomes.

Data Sources:

- Trainees' evaluations of the program and the supervisors.
- Reports of supervisors and program directors.
- Examination results and accreditation reports.
- Satisfaction surveys and graduates' performance after graduation.

Implementation Mechanism: The program committee conducts a comprehensive review at least once a year, concluding with a documented, measurable, and trackable improvement plan submitted to the specialty's scientific council.

14. Name of the Certificate

Upon successful completion of the program, passing the cognitive and practical examinations, and fulfilling all training requirements, the practical logbook, and the scientific research, the trainee is awarded the following specialty certificate:

—[Name of Awarding Body] —[Specialty Name]—

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