

**WINFOCUS**

**Advanced Ultrasound Fellowship**

**(FAWUS)**



Fellowship Handbook (2025–2026)  
International | Primarily Virtual | 12-Month Program

**Fellowship Handbook**

**Section:**Curriculum

**Program:**  WINFOCUS Advanced Ultrasound Fellowship   
**Format:** 12-Month, International, Mostly Virtual  
**Fellow Type:** Experienced clinicians with strong interest in education, clinical ultrasound, and global collaboration

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**1. Introduction**

Welcome to the WINFOCUS Advanced Ultrasound Fellowship. This 12-month international program is designed for physicians with foundational POCUS experience who wish to become educators, researchers, and leaders in ultrasound.

The fellowship emphasizes hands-on scanning, teaching skill development, program building, and global ultrasound outreach, in alignment with WINFOCUS’s mission of expanding ultrasound education worldwide.

**2. Fellowship Leadership**

* Program Director (WINFOCUS Global)
* Program APDs
* Local Ultrasound Mentor (Home Institution)
* Education Faculty
* Research Mentor
* QA and Case Review Lead

*Each fellow must identify at least one local mentor and one global mentors to guide clinical, educational, and research components.*

**3. Fellowship Objectives**

By the end of the fellowship, participants will:

* Perform and interpret a wide range of POCUS exams independently
* Teach ultrasound in local, regional, and virtual settings
* Create original teaching materials and course content
* Conduct and present ultrasound-related research
* Collaborate with WINFOCUS on global ultrasound initiatives
* Develop administrative and leadership skills for running ultrasound programs

**4. Fellowship Structure**

This will be a 12-month structured program that blends virtual education, clinical practice, real-world teaching, and mentorship. Here’s how it’s organized:

* Core Curriculum (Virtual):
  + Fellows will study advanced ultrasound topics like physics, image acquisition and interpretation, and teaching strategies. The material will be delivered through an interactive online platform within **"WINFOCUS Academy"**. Most training will be provided through the Academy, and some specific topics will be provided by **WINFOCUS Fellowship Partner Institutions (FPIs).**
* Clinical Training:
  + Fellows must log at least 500 scans over the year, verified by their local ultrasound director or senior faculty. They should also be actively using POCUS in daily clinical practice under mentor supervision. (We only require the signed verification form.)
* Educational Development:
  + Fellows will be trained in curriculum design, assessment methods, faculty development, and educational technologies. Progress must be confirmed by the local program director or ultrasound faculty.
* Teaching Experience:
  + Fellows will actively teach in WINFOCUS courses, webinars, and national meetings. This hands-on involvement is a key part of the program.
* Regional Course Development:
  + Each fellow will be responsible for organizing and leading at least one WINFOCUS-supported course in their region.
* Research Component:
  + Fellows will work on at least one research project or contribute to an ultrasound education publication. They’re expected to present this work at a national or international meeting.
* Global Health & Outreach:
  + Fellows will have the chance to support ultrasound education efforts in underserved or low-resource settings, aligned with WINFOCUS’s global health mission.
* WINFOCUS Involvement:
  + Fellows will take part in workshops, special projects, and ongoing initiatives across the WINFOCUS network to gain real experience and grow their professional network.

**5. Eligibility Criteria**

This fellowship is open to:

* Physicians or registrars from specialties like emergency medicine, internal medicine, critical care, anesthesia, pediatrics, family medicine, and more
* Clinicians with prior experience in POCUS and a strong interest in education
* Individuals committed to contributing to ultrasound teaching and research
* Candidates willing to engage in global health efforts
* Applicants must suggest three possible mentors, including at least one local faculty member
* Fellows must either cover the tuition fee themselves or secure full or partial sponsorship (scholarship options may be available)

**6. Implementation & Support**

* Fellowship Partner Institutions (FPIs):
  + The program will be hosted by major hospitals or academic centers that collaborate with WINFOCUS. These FPIs will support both the virtual and in-person components of the program.
* Mentorship & Faculty:
  + Fellows will be guided by a team of experienced ultrasound educators from WINFOCUS. Applicants should propose three mentor names (confirmed later by the WINFOCUS leadership team).
* Funding & Sustainability:
  + WINFOCUS is working on securing funding through sponsorships, institutional support, and industry partnerships. Fellows may be funded either fully or partially based on available scholarships or external funding.
* Evaluation & Certification:
  + Fellows will be assessed through:
  + Review of their scan logbook
  + Feedback on their teaching performance
  + Their research or publication contribution
  + A final virtual exam
* Fellows who meet all the requirements will receive the official **WINFOCUS Advanced Ultrasound Fellowship Certificate**.
* FAWEUS Designation:
  + Graduates of the program will be awarded the title ***FAWUS (Fellow in Advanced WINFOCUS Ultrasound)*** during a ceremony at the WINFOCUS Annual Meeting.

**7. Communication & Coordination Plan**

* **Monthly Fellow Forum:** Virtual meeting with all fellows and leadership for updates and shared learning.
* **Quarterly Progress Reports:** Fellows submit short updates on clinical scans, teaching activities, and research.
* **Shared Digital Platform:** A central fellowship portal will host resources, logbooks, and discussion boards.
* **Annual Fellowship Report:** Summarizes program outcomes, fellow achievements, and areas for improvement.

**8. Curriculum Overview**

The fellowship integrates:

|  |  |
| --- | --- |
| **Component** | **Description** |
| Clinical Ultrasound | 500+ scans with documentation and mentor review |
| Online Core Curriculum | Self-paced didactic modules on core topics- WINFOCUS Academy |
| Teaching Development | Lectures, webinars, course planning, teaching video creation |
| Research Participation | 1 project: QI, case report, study, or education-based paper |
| Program Leadership | Learning to run courses, build programs, implement QA systems |
| QA & Image Review | Regular scan audits, peer discussion, mentor feedback |
| Global Health (Optional) | Outreach opportunities with WINFOCUS and partners |

### **9. Core Didactic Modules (Virtual Learning)**

Fellows will complete a structured series of online learning modules. These include video lectures, assigned readings, and discussion-based webinars.

#### Topics:

* **Ultrasound Physics & Instrumentation**
  + Knobology, resolution, Doppler principles
  + Common artifacts and troubleshooting
  + Bioeffects and ALARA principle
* **Image Acquisition & Interpretation**
  + Basic and advanced cardiac ultrasound
  + eFAST, trauma scanning
  + RUQ, renal, bladder, biliary tree
  + OB/GYN (transabdominal and transvaginal)
  + MSK, ocular, soft tissue
  + DVT and vascular protocols
* **Procedural Ultrasound**
  + Vascular access (central, peripheral)
  + Nerve blocks
  + Paracentesis, thoracentesis
  + Pericardiocentesis, LP, foreign body removal
* **Critical Care Ultrasound**
  + IVC, fluid status
  + Lung and pleural ultrasound (BLUE protocol)
  + RUSH and shock evaluation
  + Diastology and advanced cardiac measures
* **Special Topics**
  + Pediatric ultrasound
  + Global health applications
  + Billing, documentation, and program management
  + Teaching with ultrasound: pedagogy and presentation skills

### **10. Quality Assurance (QA) & Image Review**

QA is a critical part of both skill building and program leadership training.

#### Expectations:

* Review at least **200 of your own scans** with a mentor or WINFOCUS faculty
* Participate in **virtual QA case rounds** at least **once per quarter**
* Submit selected images for WINFOCUS teaching files (deidentified)

Learn to give structured feedback to learners and colleagues

### **11. Administration & Leadership Skills**

To prepare fellows for future roles in program direction or education leadership.

#### Topics:

* Ultrasound machine selection and maintenance
* Image archiving, labeling, and storage systems
* Teaching file development
* Billing, coding, and documentation standards
* Running a hospital-based or regional ultrasound program
* Working with institutional leadership

**12. Clinical Ultrasound Training**

**Requirements:**

* 500+ scans documented in logbook
* Supervision or review by local mentor
* Core application categories must be covered

|  |  |
| --- | --- |
| **Scan Type** | **Recommended Minimums** |
| Cardiac | 50 |
| Lung | 30 |
| eFAST | 40 |
| Gallbladder/Biliary | 30 |
| Aorta | 20 |
| Renal/Bladder | 30 |
| OB/GYN | 25 |
| DVT | 20 |
| MSK / Soft Tissue | 20 |
| Procedural Guidance | 40 |

**13. Educational Development & Teaching**

**Deliverables:**

* Two formal lectures (case-based, POCUS-focused)
* One regional ultrasound course or workshop organized by the fellow
* One short teaching video (3–8 minutes, topic of choice)
* Active role in 1–2 WINFOCUS webinars or events

**14. Research & Scholarship**

**Requirement:**

Each fellow must complete **one** scholarly activity:

* Prospective research
* Case series or literature review
* Education/implementation study
* Quality improvement project

**Final Output:**

* Abstract for presentation (WINFOCUS, ACEP, SAEM, local national meeting, etc.)
* OR peer-reviewed submission
* OR detailed project report with educational impact

**15. Fellowship Schedule & Timeline**

|  |  |  |
| --- | --- | --- |
| **Month** | **Focus** | **Milestones** |
| 1 | Orientation, scan log start | Mentors assigned, modules started |
| 2–3 | Core scanning (FAST, Lung, Cardiac) | Lecture #1 planning, case submission |
| 4 | Abdominal + DVT | Lecture #1 delivered |
| 5–6 | OB/GYN, Procedures | Research proposal submitted |
| 7 | Teaching video, MSK | Teaching video submitted |
| 8 | QA systems + lecture #2 prep | Lecture #2 delivery |
| 9 | Finalize course logistics | Regional course hosted |
| 10 | Research writing and presentation prep | Research abstract submitted |
| 11 | Final QA review | Scan log completed |
| 12 | Final evaluation and exam | Graduation & FAWUS award |

**16. Evaluation & Graduation Requirements**

|  |  |
| --- | --- |
| **Area** | **Requirement** |
| Scanning | 500+ scans, verified by mentor |
| Teaching | 2 lectures + 1 course + 1 video |
| Research | 1 scholarly project submitted or presented |
| Online Curriculum | All modules completed |
| QA & Image Review | Active participation, 250+ reviewed images |
| Professionalism | Positive mentor feedback, timely participation |
| Final Exam | Multiple choice + case review format |

Fellows who meet all criteria will receive:

* **WINFOCUS Advanced Ultrasound Fellowship Certificate**
* **FAWUS Designation** (Fellow in Advanced WINFOCUS Ultrasound)

**17. Program Policies**

* Fellows are expected to submit monthly logbook updates
* All educational deliverables must follow WINFOCUS branding guidelines
* Travel for WINFOCUS meetings or outreach is optional and self-funded unless sponsored
* Failure to meet core requirements may delay graduation or require remediation

## **18. Month-by-Month Curriculum Guide**

### 🟩 **Month 1 – Orientation & Foundations**

* Fellowship onboarding
* Setup scan logbook, teaching tracker, research template
* Meet local + WINFOCUS mentors

**Core Topics:**

* Introduction to POCUS & WINFOCUS goals
* Knobology and Machine Basics
* Basic Ultrasound Physics
* Understanding Image Artifacts
* Documentation & Clinical Integration

### 🟦 **Month 2 – Trauma, FAST & Lung Ultrasound**

**Core Topics:**

* eFAST (trauma protocol)
* Lung ultrasound (A/B lines, pleural effusion, pneumothorax)
* M-mode and Lung Sliding

**Activities:**

* Submit first 30 scans
* Begin teaching preparation
* Attend QA case review session

### 🟨 **Month 3 – Cardiac and IVC**

**Core Topics:**

* Cardiac windows: Parasternal, Apical, Subxiphoid
* Global function assessment
* IVC measurement and fluid assessment
* Shock protocols (RUSH)

**Activities:**

* 1st Lecture topic confirmed
* Mentor scan review
* Attend at least one WINFOCUS webinar

### 🟧 **Month 4 – Abdomen & Renal**

**Core Topics:**

* Gallbladder & Biliary Tree
* Abdominal Aorta (AAA)
* Renal & Bladder
* Hydronephrosis vs. cysts vs. masses

**Activities:**

* Deliver 1st lecture
* Submit research/project idea
* Attend mid-year check-in with mentor

### 🟪 **Month 5 – OB/GYN & DVT**

**Core Topics:**

* Transabdominal & Transvaginal Ultrasound
* Intrauterine vs. Ectopic Pregnancy
* DVT (2-point and full leg compression)
* Vein vs. artery techniques

**Activities:**

* Scan log updated to 200+ scans
* Submit 2–3 cases for QA review
* Plan for teaching video recording

### 🟥 **Month 6 – Procedures & Nerve Blocks**

**Core Topics:**

* Vascular Access (Central & Peripheral)
* Nerve Block Basics (Femoral, Interscalene, Fascia Iliaca)
* Paracentesis and Thoracentesis
* Foreign body detection

**Activities:**

* Midpoint review with program lead
* 2nd Lecture prep
* Teaching video submitted

### 🟩 **Month 7 – MSK & Soft Tissue**

**Core Topics:**

* Abscess vs. Cellulitis
* Joint Effusions
* Muscle and Tendon Scanning
* Foreign body localization

**Activities:**

* Begin organizing regional ultrasound course
* Peer review of fellow’s teaching video
* Research progress report due

### 🟦 **Month 8 – Education & Feedback**

**Core Topics:**

* Adult Learning Theory for POCUS
* Giving Constructive Feedback
* Simulation and Skill Stations
* Lecture Design Strategies

**Activities:**

* Co-teach WINFOCUS event
* Attend QA session
* Update scan log to 350+

### 🟨 **Month 9 – Program Management**

**Core Topics:**

* Ultrasound program administration
* Credentialing and policy writing
* Image review systems
* Budgeting, equipment selection

**Activities:**

* Submit regional course report
* Attend outreach info session (optional)
* Research draft due

### 🟧 **Month 10 – Pediatric & Global Health POCUS**

**Core Topics:**

* Pediatric lung, cardiac, and abdominal ultrasound
* Adapting POCUS for resource-limited settings
* Cross-cultural education in ultrasound
* Translation and localization of content

**Activities:**

* Attend WINFOCUS outreach workshop
* Case review submission for group discussion

### 🟪 **Month 11 – Final Projects & Presentation**

**Core Topics:**

* Final case preparation
* Research presentation skills
* Abstract writing tips
* Final QA deep dive

**Activities:**

* Research project presented or submitted
* Complete scan log (500+)
* Prep for final online exam

### 🟥 **Month 12 – Review & Graduation**

**Core Topics:**

* Wrap-up discussions
* Peer reflections and fellow feedback
* Career planning and next steps

**Activities:**

* Final mentor sign-off
* Online exam
* Graduation + FAWEUS ceremony (virtual or at annual meeting)

**19. Appendices**

A. Scan Log Template (Excel or Google Sheet format)

B. Lecture Submission Checklist

C. Research Proposal Template

D. Fellowship Timeline Planner

E. Final Evaluation Form (mentor sign-off)

**WINFOCUS Fellowship Template Pack**

**1. Scan Log Template**

*For tracking the required 500+ scans, with categories and verification.*

| Date | Scan Type | Indication | Findings (Summary) | Image Saved? | Verified By (Mentor) | Notes |

|------------|------------------|--------------------|---------------------|--------------|-----------------------|--------------|

| 2025-10-01 | Cardiac (Subxip) | Chest pain | Normal EF | Yes | Dr. A. Kamal | Good image |

| 2025-10-02 | Lung | SOB | B-lines | Yes | Dr. L. Musa | |

| … | … | … | … | … | … | … |

**Category Tracker (Optional Summary Tab):**

| Scan Type | Target | Completed | Remaining |

|------------------------|--------|-----------|-----------|

| Cardiac | 50 | | |

| Lung | 30 | | |

| FAST | 40 | | |

| Gallbladder | 30 | | |

| Aorta | 20 | | |

| Renal / Bladder | 30 | | |

| OB/GYN | 25 | | |

| DVT | 20 | | |

| MSK / Soft Tissue | 20 | | |

| Procedures | 40 | | |

| \*\*TOTAL\*\* | 500+ | | |

**2. Teaching Tracker Template**

| Date | Activity Type | Title / Topic | Audience | Format | Feedback/Outcome |

|------------|---------------------|-----------------------------------|------------------------|------------|---------------------------------|

| 2025-11-15 | Lecture | Intro to Lung Ultrasound | Residents (Nigeria) | Virtual | Well received; recorded |

| 2026-01-12 | Regional Course Lead | Northern Africa US Workshop | Mixed clinicians | In-person | 32 attendees; full-day event |

| 2026-03-05 | Teaching Video | FAST exam walkthrough | Global audience | Pre-recorded| Uploaded to WINFOCUS portal |

| … | … | … | … | … | … |

**3. Online Module Completion Tracker**

| Module Name | Status | Completion Date | Notes |

|------------------------------------|------------|------------------|--------------------------|

| Basic Physics & Knobology | Complete | 2025-10-10 | |

| Lung & Pleura | Complete | 2025-10-20 | |

| Cardiac & IVC | In Progress| | Watch last 2 segments |

| FAST / Trauma | Not Started| | Assigned for Nov |

| Procedures | Not Started| | |

| Education & Feedback Strategies | Not Started| | |

**4. Research Project Tracker**

| Project Title | Type | Timeline | Submitted To | Status | Mentor |

|-------------------------------------|------------------|-------------------|------------------|--------------|----------------|

| Lung US for TB detection (Kenya) | Prospective Study| Jan–Jun 2026 | WINFOCUS Meeting | Data Collected| Dr. S. Rahimi |

| POCUS Teaching in Refugee Settings | Review Article | Oct–Feb 2026 | TBD | Drafting | Dr. T. Alvarez |

**5. Graduation Checklist**

| Requirement | Status | Notes |

|--------------------------------------------|----------|-------------------------------------|

| 500 Scans Logged | ✅ | Submitted April 2026 |

| 2 Lectures Delivered | ✅ | Nov 2025 + Mar 2026 |

| Regional Course Organized | ✅ | Abuja, Jan 2026 |

| Teaching Video Submitted | ✅ | Feb 2026 |

| Research Project Presented/Submitted | In Progress| Abstract submitted |

| Online Curriculum Completed | Partial | 4/7 done |

| QA Sessions Attended (min 4) | ✅ | Tracked via email |

| Final Exam Passed | Pending | Scheduled May 2026 |

| Mentorship Check-Ins Completed | ✅ | Signed forms uploaded |