

1 **ACGME Program Requirements for Fellowship Education**
2 **in the Subspecialties of Diagnostic Radiology**

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4 ***Common Program Requirements are in BOLD***

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6 Introduction

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8 These requirements apply to all of the accredited subspecialty areas of diagnostic radiology and
9 should be consulted along with the individual subspecialty program requirements.

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11 A. Definition and Scope of Fellowship

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13 A fellowship program in a subspecialty of diagnostic radiology is an educational
14 experience of at least one year designed to develop advanced knowledge and
15 skills in a specific clinical area. ~~All educational components of the program~~
16 ~~should be related to program goals.~~ The program design and/or structure must
17 be approved by the Review Committee as part of the regular review process.

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19 ~~2. There must be close interaction between the core residency program in~~
20 ~~diagnostic radiology and the fellowship program. Lines of responsibility for~~
21 ~~the diagnostic radiology residents and the subspecialty fellow must be~~
22 ~~clearly defined. It is imperative that the educational program for the~~
23 ~~subspecialty fellow not adversely affect the education of the diagnostic~~
24 ~~radiology residents, in terms of either experience or patient responsibility.~~

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26 I. Institutions

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28 A. Sponsoring Institution

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30 **One sponsoring institution must assume ultimate responsibility for the**
31 **program, as described in the Institutional Requirements, and this**
32 **responsibility extends to fellow assignments at all participating sites.**

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34 **The sponsoring institution and the program must ensure that the program**
35 **director has sufficient protected time and financial support for his or her**
36 **educational and administrative responsibilities to the program.**

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38 B. Participating Sites

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40 1. **There must be a program letter of agreement (PLA) between the**
41 **program and each participating site providing a required**
42 **assignment. The PLA must be renewed at least every five years.**

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44 **The PLA should:**

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46 a) **identify the faculty who will assume both educational and**
47 **supervisory responsibilities for fellows;**

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49 b) **specify their responsibilities for teaching, supervision, and**
50 **formal evaluation of fellows, as specified later in this**
51 **document;**

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- c) **specify the duration and content of the educational experience; and,**
 - d) **state the policies and procedures that will govern fellow education during the assignment.**
2. **The program director must submit any additions or deletions of participating sites routinely providing an educational experience, required for all fellows, of one month full time equivalent (FTE) or more through the Accreditation Council for Graduate Medical Education (ACGME) Accreditation Data System (ADS).**
- a) ~~A maximum of three months of the fellowship may be spent in rotations to affiliated institutions.~~
3. A F ~~fellowship~~ programs in the subspecialties of diagnostic radiology ~~may~~ should be accredited in institutions that either sponsor a residency education program in diagnostic radiology accredited by the [Accreditation Council for Graduate Medical Education \(ACGME\)](#) or are integrated by formal agreement into such programs. Close cooperation between the fellowship and residency program directors is required. An exception to the above is a pediatric radiology fellowship which is structured in a freestanding children's hospital.

II. Program Personnel and Resources

A. Program Director

1. **There must be a single program director with authority and accountability for the operation of the program. The sponsoring institution's GMEC must approve a change in program director. After approval, the program director must submit this change to the ACGME via the ADS.**
- a) The program director should spend all of his/her professional time in the subspecialty, and devote sufficient time to fulfill all responsibilities inherent in meeting the educational goals of the program.
2. **Qualifications of the program director must include:**
- a) **requisite specialty expertise and documented educational and administrative experience acceptable to the Review Committee;**
 - b) **current certification in the specialty by the American Board of Diagnostic Radiology or Radiology, or specialty qualifications that are acceptable to the Review Committee and;**
 - c) **current medical licensure and appropriate medical staff**

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appointment.

- d) current subspecialty certification in those subspecialties in which certification is offered;
- e) post-residency experience in the subspecialty area, including preferably fellowship training, or five years of practice experience in the subspecialty for those subspecialties in which no certification is offered;

3. The program director must administer and maintain an educational environment conducive to educating the fellows in each of the ACGME competency areas. The program director must:

- a) **prepare and submit all information required and requested by the ACGME;**
- b) **be familiar with and oversee compliance with ACGME and Review Committee policies and procedures as outlined in the ACGME Manual of Policies and Procedures;**
- c) **obtain review and approval of the sponsoring institution's GMEC/DIO before submitting to the ACGME information or requests for the following:**
 - (1) **all applications for ACGME accreditation of new programs;**
 - (2) **changes in fellow complement;**
 - (3) **major changes in program structure or length of training;**
 - (4) **progress reports requested by the Review Committee;**
 - (5) **responses to all proposed adverse actions;**
 - (6) **requests for increases or any change to fellow duty hours;**
 - (7) **voluntary withdrawals of ACGME-accredited programs;**
 - (8) **requests for appeal of an adverse action;**
 - (9) **appeal presentations to a Board of Appeal or the ACGME; and,**
- d) **obtain DIO review and co-signature on all program information forms, as well as any correspondence or document submitted to the ACGME that addresses:**

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(1) program citations, and/or

(2) request for changes in the program that would have significant impact, including financial, on the program or institution.

~~e) ensure that subspecialty conferences, including review of all current complications and deaths, seminars, and clinical and basic science instruction, are regularly scheduled. Active participation of the fellow in the planning and the production of these meetings is essential.~~

B. Faculty

1. There must be a sufficient number of faculty with documented qualifications to instruct and supervise all fellows.

2. The faculty must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities and demonstrate a strong interest in the education of fellows.

~~a) Faculty must demonstrate a commitment to their own continuing medical education and participate in scholarly activities.~~

3. The physician faculty must have current certification in the specialty by the American Board of Diagnostic Radiology or Radiology, or possess qualifications acceptable to the Review Committee.

4. The physician faculty must possess current medical licensure and appropriate medical staff appointment.

C. Other Program Personnel

The institution and the program must jointly ensure the availability of all necessary professional, technical, and clerical personnel for the effective administration of the program.

1. A program coordinator must devote sufficient time to support the administration and educational conduct of the program.

D. Resources

1. The institution and the program must jointly ensure the availability of adequate resources for fellow education, as defined in the specialty program requirements.

~~2. A sufficient number of patients must be available to ensure appropriate inpatient and outpatient experience for each fellow without adversely affecting the experience of residents in the diagnostic radiology core program.~~

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2. The program must have appropriate facilities and space for the education of the fellows. There must be office space, conference space, and access to computers.

E. Medical Information Access

Fellows must have ready access to specialty-specific and other appropriate reference material in print or electronic format. Electronic medical literature databases with search capabilities should be available.

III. Fellow Appointments

A. Eligibility Criteria

Each fellow must successfully complete an ACGME-accredited specialty program and/or meet other eligibility criteria as specified by the Review Committee. The program must document that each fellow has met the eligibility criteria.

1. Prerequisite training for entry into a ~~subspecialty~~ the fellowship program of ~~Diagnostic radiology~~ should include the satisfactory completion of a diagnostic radiology residency program accredited by the ACGME or the Royal College of Physicians and Surgeons of Canada (RCPSC), or completion of other radiology training experience judged to be suitable acceptable to by the program director.

B. Number of Fellows

The program director may not appoint more fellows than approved by the Review Committee, unless otherwise stated in the specialty-specific requirements. The program's educational resources must be adequate to support the number of fellows appointed to the program.

1. ~~Fellowship programs will not be approved if they have substantial negative impact on the education of the diagnostic radiology fellows in the core program.~~

1. The presence of other learners (including, but not limited to residents from other specialties, subspecialty fellows, PhD students, and nurse practitioners) in the program must not interfere with the appointed fellows' education.

2. The fellows must not dilute or detract from the educational opportunities available to residents in the core diagnostic radiology residency program. Lines of responsibilities of the diagnostic radiology residents and the subspecialty fellow must be clearly defined.

IV. Educational Program

A. The curriculum must contain the following educational components:

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1. **Skills and competencies the fellow will be able to demonstrate at the conclusion of the program. The program must distribute these skills and competencies to fellows and faculty annually, in either written or electronic form. These skills and competencies should be reviewed by the fellow at the start of each rotation;**

2. **ACGME Competencies**

The program must integrate the following ACGME competencies into the curriculum:

a) Patient Care

Fellows must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Fellows:

- (1) ~~must have the opportunity to provide consultation with faculty supervision referring physicians or services; They should have clearly defined educational responsibilities for diagnostic radiology residents, medical students, and professional personnel. These teaching experiences should correlate basic biomedical knowledge with the clinical aspects of the subspecialty.~~
- (2) should have a clearly defined role in educating diagnostic residents, and if appropriate, medical students and other professional personnel in the care and management of patients;
- (3) must follow standards of care for practicing in a safe environment, attempt to reduce errors, and improve patient outcomes;
- (4) must apply low dose radiation techniques in both adults and children;
- (5) must have the opportunity to perform and interpret all of the following under close, graded responsibility and supervision: (List subspecialty-specific clinical requirements to include types and numbers of exams and/or invasive studies fellows must complete during the 12-month fellowship.)

b) Medical Knowledge

Fellows must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. Fellows:

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- (1) must provide have demonstrate a level of expertise in the knowledge of those areas appropriate for a radiologist specialist

[Specify for each subspecialty what those areas are] advanced education so that fellows can to acquire special skills and knowledge in the subspecialty. This education should consist of a cognitive and technical component. The cognitive component should emphasize the scholarly attributes of self-instruction, teaching, skilled clinical analysis, sound judgment, and research creativity. The technical component must provide appropriate opportunity for the fellows to acquire the operative and other psychomotor skills required for practice.

- (2) must be educated in low dose radiation techniques in both adults and children, and learn how to prevent and/or treat complications of contrast administration;.
- (3) should develop skills in preparing and presenting educational material for medical students, graduate medical staff, and allied health personnel;.
- (4) (Specialty-specific curriculum listed here)

c) Practice-based Learning and Improvement

Fellows are expected to develop skills and habits to be able to meet the following goals:

- (1) **systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement, and**
- (2) **locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems.**

d) Interpersonal and Communication Skills

Fellows must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

- (1) Fellows must communicate effectively with patients, colleagues, referring physicians, and other members of the health care team concerning imaging and procedure appropriateness, informed consent, safety issues, and the results of imaging tests or procedures. Competence in oral

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communication must be judged through direct observation.
Competence in written communication must be judged on
the basis of the quality and timeliness of dictated reports.

e) Professionalism

Fellows must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Fellows must demonstrate:

- (1) compassion, integrity, and respect for others;
- (2) responsiveness to patient needs;
- (3) respect for patient privacy and autonomy;
- (4) accountability to patients, society and the profession;
- (5) sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation;
- (6) compliance with institutional and departmental policies (HIPAA, the Joint Commission, patient safety, infection control, etc).

f) Systems-based Practice

Fellows must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Fellows must:

- (1) work in interprofessional teams to enhance patient safety and improve patient care quality.
- (2) participate in identifying system errors and implementing potential systems solutions.

3. Fellows must participate on a regular basis in scheduled conferences. Conferences must provide for progressive fellow participation. These conferences should include:

- a) intradepartmental conferences
- b) departmental grand rounds

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410 c) at least one interdisciplinary conference per week
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412 d) peer review case conference and/or M&M conference
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414 | 4. Fellows should attend and participate in local conferences and at least
415 one national meeting or post graduate course in the subspecialty while in
416 training. Reasonable expenses should be reimbursed.
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418 5. Fellows must attend didactic conferences directed to the level of the
419 fellow that provides formal review of the topics in the specialty curriculum.
420 These conferences should occur at least twice a month.
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422 B. Fellows' Scholarly Activities

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424 1. The program must provide instruction in the fundamentals of experimental
425 design, performance, and interpretation of results.
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427 2. All fellows must engage in a scholarly project. This project may take the
428 form of laboratory research, clinical research, analysis of disease
429 processes, imaging techniques or practice management issues. The
430 results of such projects must be submitted for publication or presented at
431 local, regional, national or international meetings.
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433 V. Evaluation

434 A. Fellow Evaluation

435 1. Formative Evaluation

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437 a) **The faculty must evaluate fellow performance in a timely**
438 **manner.**
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440 b) **The program must:**
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442 (1) **provide objective assessments of competence in**
443 **patient care, medical knowledge, practice-based**
444 **learning and improvement, interpersonal and**
445 **communication skills, professionalism, and systems-**
446 **based practice;**
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448 (2) **use multiple evaluators (e.g., faculty, peers, patients,**
449 **self, and other professional staff); and,**
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451 (3) **provide each fellow with documented semiannual**
452 **evaluation of performance with feedback.**
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454 (a) The program must ensure that there is at least a
455 quarterly review which should include:
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457 (i) review of faculty's evaluations of the fellow,
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(ii) review of the procedure log,

(iii) documentation of compliance with institutional and departmental policies (HIPAA, the Joint Commission, patient safety, infection control, etc).

c) **The evaluations of fellow performance must be accessible for review by the fellow, in accordance with institutional policy.**

2. Summative Evaluation

The program director must provide a summative evaluation for each fellow upon completion of the program. This evaluation must become part of the fellow's permanent record maintained by the institution, and must be accessible for review by the fellow in accordance with institutional policy. This evaluation must:

- a) **document the fellow's performance during their education, and**
- b) **verify that the fellow has demonstrated sufficient competence to enter practice without direct supervision.**

B. Faculty Evaluation

- 1. **At least annually, the program must evaluate faculty performance as it relates to the educational program.**
- 2. **These evaluations should include a review of the faculty's clinical teaching abilities, commitment to the educational program, clinical knowledge, professionalism, and scholarly activities.**
- 3. These evaluations must include a written confidential evaluation by the fellows. Faculty must receive annual feedback from these evaluations.

C. Program Evaluation and Improvement

- 1. **The program must document formal, systematic evaluation of the curriculum at least annually. The program must monitor and track each of the following areas:**
 - a) **fellow performance, and**
 - b) **faculty development**
- 2. **If deficiencies are found, the program should prepare a written plan of action to document initiatives to improve performance in the areas listed in section V.C.1. The action plan should be reviewed and approved by the teaching faculty and documented in meeting**

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513 VI. Fellow Duty Hours in the Learning and Working Environment

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515 A. Principles

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517 1. The program must be committed to and be responsible for
518 promoting patient safety and fellow well-being and to providing a
519 supportive educational environment.

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521 2. Duty hour assignments must recognize that faculty and fellows
522 collectively have responsibility for the safety and welfare of patients.

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524 B. Supervision of Fellows

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526 The program must ensure that qualified faculty provide appropriate
527 supervision of fellows in patient care activities.

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529 C. Duty Hours (the terms in this section are defined in the ACGME Glossary
530 and apply to all programs)

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532 Duty hours are defined as all clinical and academic activities related to the
533 program; i.e., patient care (both inpatient and outpatient), administrative
534 duties relative to patient care, the provision for transfer of patient care,
535 time spent in-house during call activities, and scheduled activities, such as
536 conferences. Duty hours do *not* include reading and preparation time spent
537 away from the duty site.

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539 1. Duty hours must be limited to 80 hours per week, averaged over a
540 four-week period, inclusive of all in-house call activities.

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542 a) ~~The RRC for Diagnostic Radiology will not consider requests for~~
543 ~~exception to the limit to 80 hours per week, averaged monthly.~~

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545 2. Fellows must be provided with one day in seven free from all
546 educational and clinical responsibilities, averaged over a four-week
547 period, inclusive of call.

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549 3. Adequate time for rest and personal activities must be provided.
550 This should consist of a 10-hour time period provided between all
551 daily duty periods and after in-house call.

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553 D. On-call Activities

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555 1. In-house call must occur no more frequently than every-third-night,
556 averaged over a four-week period.

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558 2. Continuous on-site duty, including in-house call, must not exceed 24
559 consecutive hours. Fellows may remain on duty for up to six
560 additional hours to participate in didactic activities, transfer care of
561 patients, conduct outpatient clinics, and maintain continuity of

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medical and surgical care.

- a) During this time, fellows may complete call activities and participate in read-out sessions with faculty of the previous night's cases.

3. No new patients may be accepted after 24 hours of continuous duty.

- a) A new patient is defined as reading a new study or participating in an interventional procedure on a patient for whom the fellow has not previously provided care.

4. At-home call (or pager call)

- a) **The frequency of at-home call is not subject to the every-third-night, or 24+6 limitation. However at-home call must not be so frequent as to preclude rest and reasonable personal time for each fellow.**
- b) **Fellows taking at-home call must be provided with one day in seven completely free from all educational and clinical responsibilities, averaged over a four-week period.**
- c) **When fellows are called into the hospital from home, the hours fellows spend in-house are counted toward the 80-hour limit.**

E. Moonlighting

Internal moonlighting must be considered part of the 80-hour weekly limit on duty hours.

- 1. Moonlighting must not interfere with the ability of the fellow to achieve the goals and objectives of the educational program.

F. Duty Hours Exceptions

The Review Committee for Diagnostic Radiology will not consider requests for duty hour exception.

VII. Experimentation and Innovation

Requests for experimentation or innovative projects that may deviate from the institutional, common, and specialty-specific program requirements must be approved in advance by the Review Committee. In preparing requests, the program director must follow Procedures for Approving Proposals for Experimentation or Innovative Projects located in the ACGME Manual on Policies and Procedures. Once a Review Committee approves a project, the sponsoring institution and program are jointly responsible for the quality of education offered to residents for the duration of such a project.

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