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Medical Postgraduate Education in Italy: a New Organization

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Legislative Background

Reorganization of Medical Postgraduate Schools
(Riassetto Scuole di Specializzazione di Area Sanitaria)
Law of Ministry of Education
Published 5.11.2005

Definition of Standards and Minimum Requirements of Postgraduate
Schools
(Definizione Standard e Requisiti minimi delle Scuole di Specializzazione)
Law of Ministry of Education (in agreement with Ministry of Health)
Published 8.05.2006

Residency Programs

- Medical Area
- Surgical Area
- Clinical Services Area

Medical Area

- Medical Area
 - Class of General Medicine
 - Class of Specialty Medicine
 - Class of Neurosciences and Behavioral Sciences
 - Class of Developing Age Medicine
- Surgical Area
- Clinical Services Area

Surgical Area

- Medical Area
- Surgical Area
 - Class of General Surgery
 - Class of Specialty Surgery
 - Class of Head and Neck Surgery
 - Class of Cardiac-Thoracic-Vascular Surgery
- Clinical Services Area

Clinical Services Area

- Medical Area
- Surgical Area
- Clinical Services Area
 - Class of Diagnostic Medicine and Laboratory
 - Class of Imaging Medicine and Radiotherapy
 - Class of Clinical Specialty Services
 - Class of Biomedical Clinical Services
 - Class of Public Health
 - Class of Pharmacy
 - Class of Medical Physics

Class of General Medicine

- Internal Medicine
- Geriatrics
- Emergency Medicine
- Sport Medicine
- Thermal Medicine
- Medical Oncology
- Community Medicine

Residency Program Activation

- Residency Programs are part of the Medical Schools
- Each Medical School can activate only 1 Residency Program for each specialty and the minimum number of residency positions is 3/year

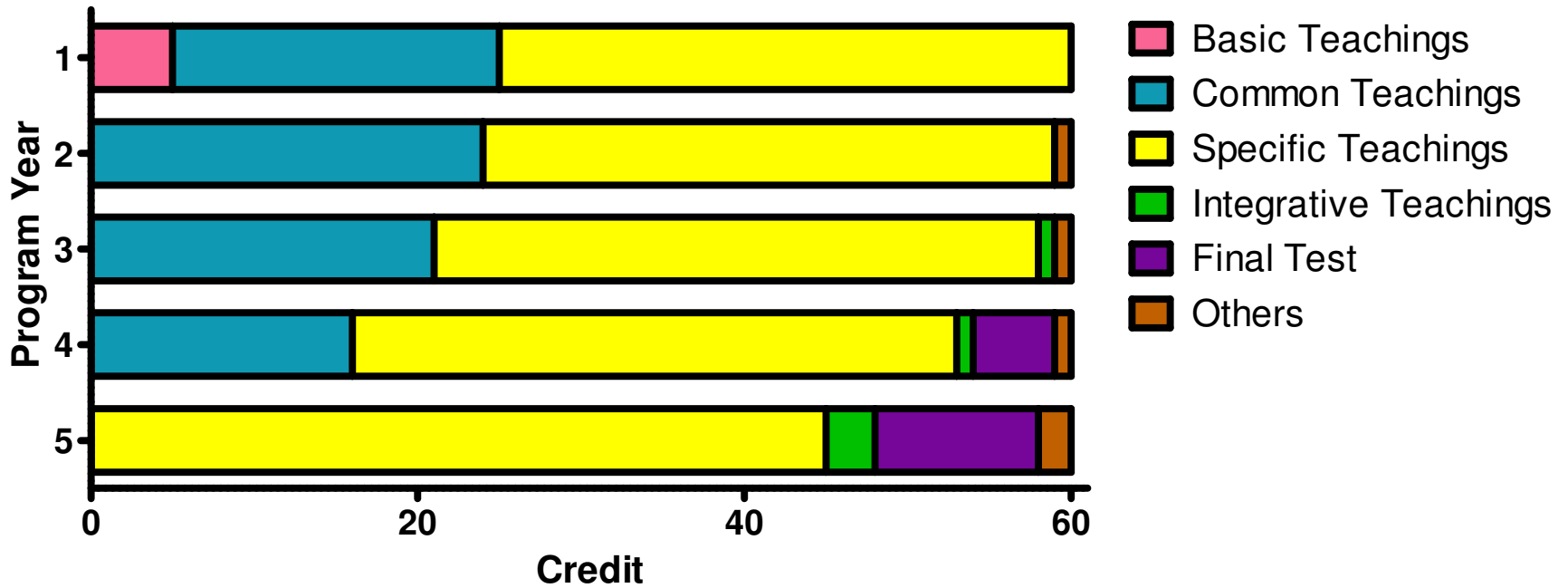
Training Activities

Training Activities	Disciplinary Bounds	Credits	Total Credits
Basic	General Teachings Necessary for the Specialist Instruction	5	5
Characterizing	Common Teachings	81 (99)*	270 (330)*
	School Specific Teachings	189 (231)*	
Similar, Integrative, and Interdisciplinary	Integrative and Interdisciplinary Teachings	5	5
Final Exam			15
Miscellaneous	Foreign Languages, Informatics, and Relational Abilities		5
TOTAL			300 (360)*

* Credits for 6-year Schools (General Surgery, Neurosurgery).

At least 210 (252) credits must be spent in practical activities.

Training Activities



Residency Program Faculty Members

- Full Professors
- Associate Professors
- Assistant Professors/Researchers
- Non-University personnel (<30%)

Emergency Medicine Learning Profile

The Emergency Medicine Specialist must acquire the theoretic, scientific, and professional skills for the primary diagnostic workout (both in-hospital and pre-hospital) and for the primary treatment of any medical, surgical, and traumatic emergencies. The Emergency Medicine Specialist must acquire professional and scientific competences in the pathophysiology, clinical presentations, and therapy of medical emergencies; furthermore, the Emergency Medicine Specialist must know the epidemiology and the management of the pre-hospital emergencies to be able to operate in **total autonomy** in the Emergency System respecting the ethical principles.

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Training Network Structures

- Reference Structure
 - University Direction
- Affiliated Structures
 - University and Non-University Direction
- Complementary Structures

General and Specific Standards

- Structural capacities
 - (architectural facilities)
- Technological capacities
- Organizational capacities
 - (professional competences)
- Clinical capacities

General Standards

STRUCTURAL STANDARDS	Minimal Levels for Accreditation	Reference Structure	Affiliated Structures
A) Administrative rooms	<ul style="list-style-type: none"> • Direction – Secretary’s Office 	YES	☐
	<ul style="list-style-type: none"> • Meeting Rooms 	YES	☐
B) Schoolrooms	<ul style="list-style-type: none"> • Traditional Schoolrooms 	YES	☐
	<ul style="list-style-type: none"> • Schoolrooms for Workshops 	YES	YES
C) Laboratories	<ul style="list-style-type: none"> • Research and/or Teaching Laboratories 	YES	☐
	<ul style="list-style-type: none"> • Clinical Laboratories or Ambulatories 	YES	YES
D) Library	<ul style="list-style-type: none"> • Traditional 	YES	☐
	<ul style="list-style-type: none"> • Computerized 	YES	☐

General Standards

INFRASTRUCTURAL STANDARDS	Minimal Levels for Accreditation	Reference Structure	Affiliated Structures
A) Educational and Technological Instruments	<ul style="list-style-type: none"> • 0.25 PC per student 	YES	YES
	<ul style="list-style-type: none"> • Internet connection and access to data base 	YES	YES
	<ul style="list-style-type: none"> • Medical and Surgical Equipments needed for the specific specialty 	YES	YES
B) Traditional Schoolroom Furniture and Equipments	<ul style="list-style-type: none"> • Individual Emplacement • Wardrobe • Blackboard • Overhead and video projector • Slide projector 	YES	☐
C) Headquarter Furniture and Equipments	<ul style="list-style-type: none"> • At least 2 PCs for: • Administrative/economical management • Data base management 	YES	☐
	<ul style="list-style-type: none"> • E-mail address • Web site • Phone lines and photocopier 	YES	☐
D) Guarantee the Presence of a data base	<ul style="list-style-type: none"> • At least to record: • Enrolled students • Educational courses 	YES	☐

Emergency Medicine

Essential Structural Standards

STRUCTURAL STANDARDS	Minimal Levels for Accreditation	Reference Structure	Affiliated Structures
A) ESSENTIAL Must be all present both in the headquarter and in the affiliated structures	<ul style="list-style-type: none"> • Emergency Department: <ul style="list-style-type: none"> – Triage – Red Room – Emergency Room 	YES	YES
	<ul style="list-style-type: none"> • Observation Unit 	YES	YES
	<ul style="list-style-type: none"> • Emergency Medicine Ward 	YES	YES
	<ul style="list-style-type: none"> • 118 System* 	* Must be present in the didactic network	

Emergency Medicine – Annexed Structural Standards

STRUCTURAL STANDARDS	Minimal Levels for Accreditation	Reference Structure	Affiliated Structures
<p>B) ANNEX*</p> <p>*At last 12 must be present in the headquarter and at least 8 must be present in each affiliated structure. These standards are not requested for the 118 System.</p>	• Out-patient clinic for Emergency Medicine patient follow-up	☐	☐
	• Decontamination Area	☐	☐
	• Negative Pressure Room	☐	☐
	• Blood Bank	☐	☐
	• Radiology (CT, MR)	☐	☐
	• Ultrasounds	☐	☐
	• Endoscopy	☐	☐
	• Operating Theatre	☐	☐
	• Obstetrics & Gynecology (Delivery Room)	☐	☐
	• Stroke Unit / Stroke Team	☐	☐
	• Trauma Center / Trauma Team	☐	☐
	• Cath Lab	☐	☐
	• Anesthesiology Intensive Care Unit	☐	☐
	• Coronary Care Unit	☐	☐
	• Neurosurgery	☐	☐
	• Orthopedics & Traumatology	☐	☐
	• Sub-specialty out-patient clinics (at least 5)	☐	☐
	• Heliport	☐	☐
• Inter-Hospital Transportation	☐	☐	

EMERGENCY MEDICINE

General and Diagnostic Structural Standards

STRUCTURAL STANDARDS	Minimal Levels for Accreditation	Reference Structure	Affiliated Structures
C) GENERAL AND DIAGNOSTIC SERVICES AVAILABLE IN THE HEADQUARTER AND IN THE AFFILIATED STRUCTURES. These standards are not requested for the 118 System	• Radiology	YES	YES
	• Ultrasounds	YES	YES
	• Laboratory	YES	YES
	• Anesthesiology	YES	YES

EMERGENCY MEDICINE

Clinical Standards

CLINICAL STANDARDS	Minimal Levels for Accreditation	Reference Structure	Affiliated Structures
E.D. ACCESS AND HOSPITAL ADMISSIONS	• E.D. Access	35,000	20,000
	• Hospital Admissions through the E.D.	7,000	4,000
PRE-HOSPITAL INTERVENTIONS	• Interventions		15,000

EMERGENCY MEDICINE

Structural Requirements

STRUCTURAL REQUIREMENTS	Type of Structure
UNIVERSITY OR NON-UNIVERSITY SPECIALISTIC STRUCTURES THAT MUST BE PRESENT IN THE TRAINING NETWORK	Emergency Department
	Internal Medicine and Medical Specialties
	General Surgery and Surgical Specialties
	General Pediatrics and Pediatric Specialties
	Anesthesiology
	Radiology
	Pre-Hospital System

Emergency Medicine

Specific Clinical Requirements

• E.D. Charts	300
• Management of Major Trauma	50*
• Airway Obstruction-Relieving Maneuvers	10
• Ambu Ventilation	30
• Invasive and Non-invasive Ventilation	30
• Oral Intubation	20*
• Central Venous Catheter Insertion	20
• Arterial Line Placement	10
• Arterial Blood Sampling and Analysis Interpretation	100
• Chest-tube Placement (with & without US-guide)	5*
• Nasogastric Tube Placement	20*
• Chest x-ray Interpretation	50
• Plain Abdominal Radiogram Interpretation	20
• Bone x-ray Interpretation	50

Emergency Medicine

Specific Clinical Requirements

• CT Interpretation (Head, Cervical Spine, Chest, Abdomen)	20
• Head MRI Interpretation	10
• Emergency Cardiac and Abdominal Ultrasounds Execution and Interpretation	40
• Peripheral Venous and Arterial Ultrasounds Execution and Interpretation	30
• EKG Execution and Interpretation	200
• Execution of Electrical Cardioversion	20*
• Execution of Electrical Defibrillation	20*
• CPR	40*
• External Pace-maker Placement	10*
• Intravenous Pace-maker Placement	5*
• Procedural Sedation and Analgesia	10*
• Local and Regional Anesthesia	10*

Emergency Medicine

Specific Clinical Requirements

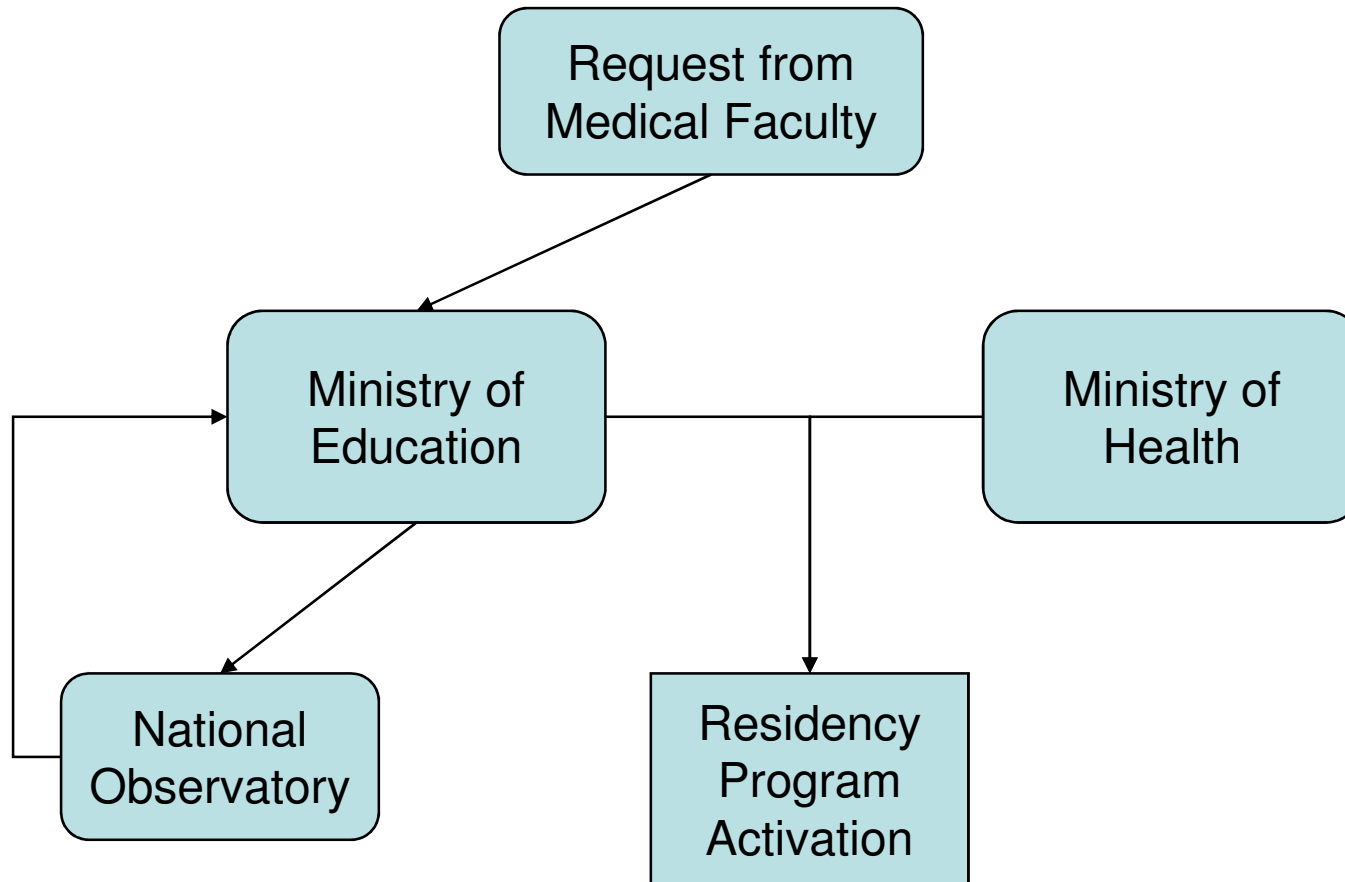
- Wound Management 40
- Immobilization for Spinal Cord Injury Prevention 5*
- Foley Catheterization 20*
- Ocular Emergency 10
- Execution and Interpretation of Otosopic Examination 10
- Anterior and Posterior Nasal Packing 5
- Active Participation to Delivery 10*
- Rotation in the E.D. for at least 3 years
- Rotation in the Pre-Hospital System for at least 3 week/year for 3 years

EMERGENCY MEDICINE

Didactic Requirements

DISCIPLINARY REQUIREMENTS	Mandatory Disciplines
FUNDAMENTAL DOCTRINES	Internal Medicine
	Pneumology
	Cardiology
	Gastroenterology
	Endocrinology
	Nephrology
	Hematology
	General Surgery
	Neurology
	Orthopedics
	Radiology and Radiotherapy
	Anesthesiology

Accreditation Process



Residency Programs

Medicine

Class of General Medicine	
Internal Medicine	38
Geriatrics	39
Emergency Medicine	26
Sport Medicine	34
Thermal Medicine	11
Medical Oncology	36
Community Medicine	6
Class of Specialty Medicine	
Allergology and Clinical Immunology	29
Dermatology and Sex Transmitted Diseases	34
Hematology	34
Endocrinology and Metabolic Disorders	36
Gastroenterology	36
Cardiology	38
Pneumology	29
Infectious Diseases	35
Tropical Medicine	7
Nephrology	32
Rheumatology	29

Residency Programs

Medicine

Class of Neurosciences and Behavioral Sciences	
Neuropathophysiology	20
Neurology	39
Neuropsychiatry of Developing Age	26
Psychiatry	38
Class of Developing Age Medicine	
Pediatrics	39

Residency Programs

Surgery

Class of General Surgery	
General Surgery	39
Surgery of Digestive Apparatus	32
Pediatric Surgery	24
Plastic, Reconstructive, and Esthetic Surgery	32
Class of Specialty Surgery	
Gynecology and Obstetrics	40
Neurosurgery	31
Orthopedics	37
Urology	37
Class of Head and Neck Surgery	
Maxillofacial Surgery	20
Ophthalmology	38
Otolaryngology	38
Class of Cardio-Thoracic-Vascular Surgery	
Cardiosurgery	30
Thoracic Surgery	33
Vascular Surgery	37

Residency Programs

Clinical Services Area

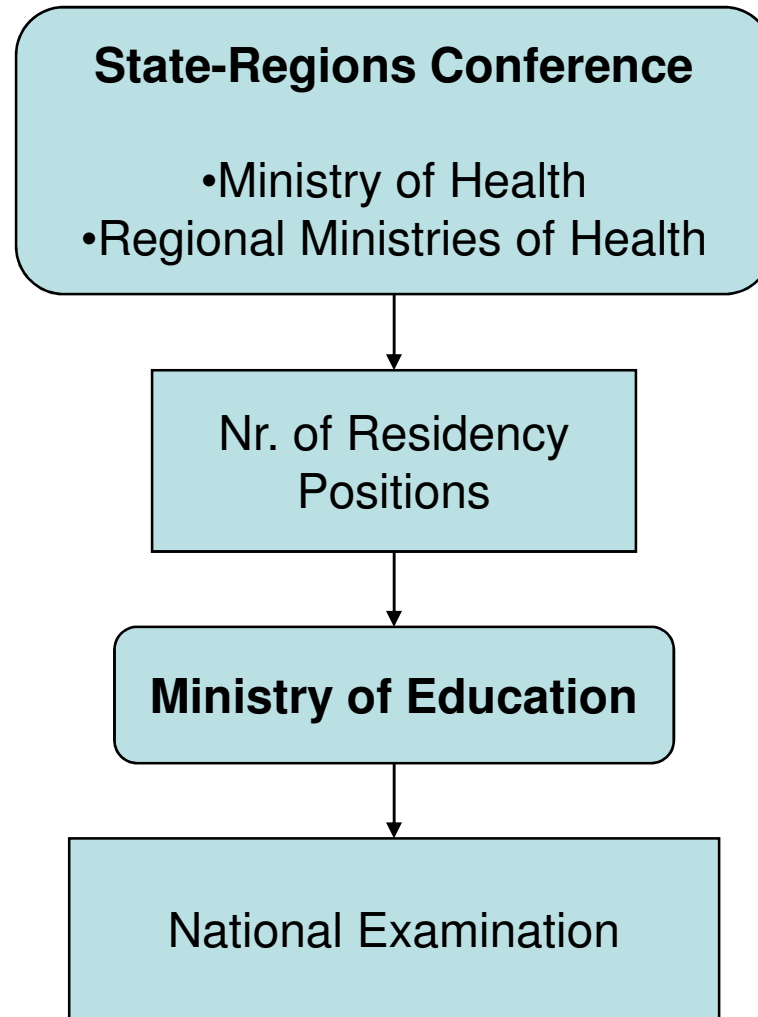
Class of Diagnostic Medicine and Laboratory	
Pathology	37
Clinical Biochemistry	29
Microbiology and Virology	31
Clinical Pathology	31
Class of Imaging Medicine and Radiotherapy	
Radiology	39
Radiotherapy	31
Nuclear Medicine	20
Class of Clinical Specialty Services	
Anesthesiology and Intensive Care	39
Audiology and Phoniatics	20
Physical and Rehabilitative Medicine	32
Medical Toxicology	11
Class of Biomedical Clinical Services	
Medical Genetics	26
Dietetics	23
Pharmacology	23

Residency Programs

Clinical Services Area

Class of Public Health	
Hygiene and Preventive Medicine	38
Air and Space Medicine	3
Work Medicine	33
Forensic Medicine	35
Health Statistics	12
Class of Pharmacy	
Hospital Pharmacy	23
Class of Medical Physics	
Medical Physics	19

Residency Positions



Residency Positions 2009

Medicine

Class of General Medicine	
Internal Medicine	225
Geriatrics	122
Emergency Medicine	50
Sport Medicine	36
Thermal Medicine	---
Medical Oncology	118
Community Medicine	2
Class of Specialty Medicine	
Allergology and Clinical Immunology	31
Dermatology and Sex Transmitted Diseases	59
Hematology	58
Endocrinology and Metabolic Disorders	75
Gastroenterology	68
Cardiology	258
Pneumology	82
Infectious Diseases	53
Tropical Medicine	6
Nephrology	92
Rheumatology	39

Residency Positions 2009

Medicine

Class of Neurosciences and Behavioral Sciences	
Neuropathophysiology	12
Neurology	102
Neuropsychiatry of Developing Age	68
Psychiatry	185
Class of Developing Age Medicine	
Pediatrics	212

Residency Positions 2009

Surgery

Class of General Surgery	
General Surgery	276
Surgery of Digestive Apparatus	31
Pediatric Surgery	23
Plastic, Reconstructive, and Esthetic Surgery	40
Class of Specialty Surgery	
Gynecology and Obstetrics	212
Neurosurgery	60
Orthopedics	185
Urology	81
Class of Head and Neck Surgery	
Maxillofacial Surgery	32
Ophthalmology	103
Otolaryngology	83
Class of Cardio-Thoracic-Vascular Surgery	
Cardiosurgery	54
Thoracic Surgery	37
Vascular Surgery	48

Residency Positions 2009

Clinical Services Area

Class of Diagnostic Medicine and Laboratory	
Pathology	58
Clinical Biochemistry	24
Microbiology and Virology	24
Clinical Pathology	53
Class of Imaging Medicine and Radiotherapy	
Radiology	392
Radiotherapy	98
Nuclear Medicine	49
Class of Clinical Specialty Services	
Anesthesiology and Intensive Care	535
Audiology and Phoniatics	18
Physical and Rehabilitative Medicine	136
Medical Toxicology	8
Class of Biomedical Clinical Services	
Medical Genetics	24
Dietetics	27
Pharmacology	19

Residency Positions 2009

Clinical Services Area

Class of Public Health	
Hygiene and Preventive Medicine	142
Air and Space Medicine	---
Work Medicine	105
Forensic Medicine	70
Health Statistics	
Class of Pharmacy	
Hospital Pharmacy	
Class of Medical Physics	
Medical Physics	

In Summary...

- 42 Medical Schools
- 1705 Residency Programs
- 5000 Residency Positions assigned to 1245 Residency Programs

