

Education, Training, and Certification of Medical physicist in Korea


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Brief History of the KSMP

- **Sep. 22, 1990** The Korean Society of Medical Physics was founded
 - Published Korean Journal of Medical Physics
 - Published Korean Dosimetry Protocol
- **Dec. 1991** 1st Korean Board of Medical Physics (KBMP)
- **Mar. 1995** 1st graduate programs in Medical Physics at Kyunggi Univ
- **May 9 2002** KSMP is approved by MOST (Ministry of Science & Technology)
- **Mar 1 2004** 1st Medical Physics Residency Program was opened at National Cancer Center
- **April 1 2006** Regulations for Maintenance of Certification
- Currently we have 250 members, 56 certified MP



Education and Training Program

Education Program from University

Regular Graduate Course

- 6 approved graduate schools
- About 15 graduates per year



2002 Course Works

- Biomedical Physics I
- Biomedical Engineering I
- Seminar on Biophysical Science
- Research Projects on Biophysical Science
- Advanced Biomedical Physics
- Advanced Biomedical Engineering
- Therapeutic Radiological Physics Rotation
- Diagnostic Radiological Physics
- Magnetic Resonance Spectroscopy & Clinical Practice
- Magnetic Resonance Imaging & Clinical Practice
- Physics in Nuclear Medicine & Clinical Rotation
- Biomechanics
- Biomedical Electronics
- Imaging Human Anatomy

1	Most programs are active for therapy
2	Some programs are for nuclear medicine
3	Programs are new to diagnostic radiology

Education Program from KSMP

- Education from KSMP
 - Advanced education program for junior MP
 - Pre-requisite for certification of MP without regular MP graduate course
 - One time per 1-2 year

2004 Education Course Education program from KSMP

Day-Year	Contents	Speaker	Fraction time
Sep. 18. 2004	Role of Medical Physicist	WS. Kang	1 hour
Sep. 18. 2004	Dosimetric Theory	BC. Cho	3 hours
Sep. 19. 2004	Introduction of Linear accelerator in Medicine	JG. Kim	4 hours
Sep. 19. 2004	Linac QA	RN. Lee	2 hours
Oct. 02. 2004	Radiation Physics (Interaction)	SH. Kim	3 hours
Oct. 03. 2004	Photon beam therapy and Dose Calculation	RN. Lee	4 hours
Oct. 16. 2004	MRI Theory and QA	BY. Choe	4 hours
Oct. 17. 2004	LDR in Brachytherapy	YH. Ji	2 hours
Oct. 17. 2004	Dose Correction in KFDA	KY. Kim	2 hours
Oct. 17. 2004	HDR in Brachytherapy	YY. Han	2 hours
Oct. 30. 2004	Radiation Protection	JK. Lee	4 hours
Oct. 31. 2004	SRS	DJ. Lee	3 hours
Oct. 31. 2004	Shielding Calculation in Treatment Room	YH. Ji	2 hours
Nov. 13. 2004	Radiobiology	MJ. Cho	4 hours
Nov. 14. 2004	Human Anatomy	HC. Park	3 hours
Nov. 14. 2004	Molecular basis of cancer	HC. Park	2 hours
Nov. 27. 2004	Oncology	SD. An	4 hours
Nov. 28. 2004	Photon beam Dose Calculation Algorithm	BC. Cho	3 hours
Nov. 28. 2004	Treatment Planning	SH. Kim	2 hours
Dec. 11. 2004	Electron beam Therapy	SY. Park	2 hours
Dec. 12. 2004	Nuclear Medicine 1	CW. Cho	3 hours
Dec. 12. 2004	Nuclear Medicine 2	Y. Choi	2 hours
Dec. 18. 2004	Ion Chamber 1	JG. Kim	2 hours
Dec. 18. 2004	TLD in Radiation Detector	KH. Kim	2 hours
Dec. 19. 2004	Diode in Radiation Detector	YG. Oh	2 hours
Dec. 19. 2004	Ion Chamber2 in Radiation Detector	KC. Shin	2 hours
Dec. 19. 2004	Film dosimetry	DH. Chung	2 hours
Jan. 08. 2005	IMRT	BY. Lee	4 hours
Jan. 09. 2005	Computed Tomography (CT)	HJ. Chung	3 hours
Jan. 22. 2005	Brachytherapy QA	JH. Choi	2 hours
Jan. 22. 2005	Total Body Irradiation (TBI)	YY. Han	2 hours
Jan. 23. 2005	Particle Accelerator	SY. Park	2 hours
Jan. 23. 2005	CyberKnife	DH. Lee	2 hours
Feb. 05. 2005	Dose Correction Protocol	DO. Shin	4 hours

Education Program for Radiological Technologist

- 20,000 certified R.T
- 2 year program started in 1963
- 3 yr program started in 1991
- 4 yr program started in 2000
- 36 colleges (2500 students per year)



Professional training

- Accredited Residency Program
 - Medical Physics Academy of National Cancer Center



The NCC's medical physics residency program is an KSMP accredited program intended to provide comprehensive training and experience in radiation oncology physics to candidates with a Ph.D. degree in physics, medical physics or a closely related field

- 1st Residency program in Korea since 2004
- Fully accredited by KSMP as two years program
- Currently 4 residents (2 1st year, 2 2nd year)
1 medical physics fellow

Other Residency Programs

Severance Hospital

- Started in 2007. 03
- 2 year residency program
- Medical Physics, Nuclear Physics or Physics M.S degree required



Asan Medical Center

- Started in 2007. 09
- 2 year residency program
- Medical Physics, Nuclear Physics or Physics M.S degree required



Collaboration Training at CMC

- Graduate school
- Collaboration with hospitals in Korea and foreign countries



Ewha Womans University

- Started in 2008.09
- 2 year residency program
- MS or PhD in Medical Physics related area



Summary for Education and Professional practice of MP in Korea

- Education Program
 - 3 types of educational programs
 - 6 Universities offer graduate program
 - No accredited education program
- Professional Training Program
 - 1 accredited residency program and 1 is in the process
 - 2 centers offer residency programs
 - Many clinical training centers



Certification Program

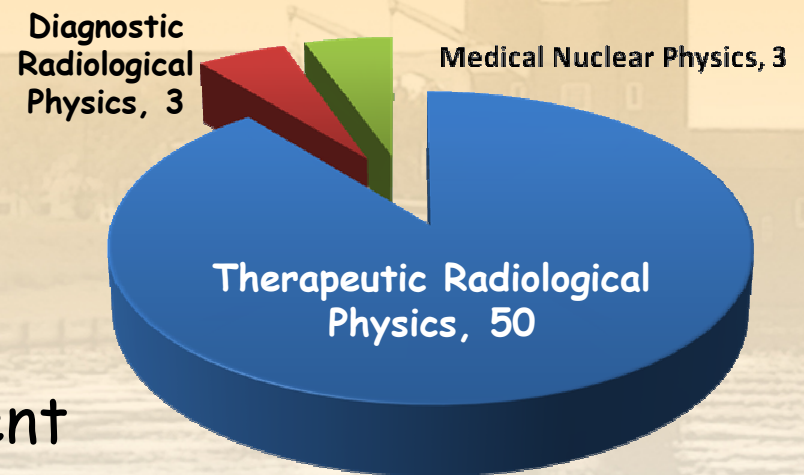
Certification examination

- Korean Board of Medical Physics(KBMP) was established in 1991
- The KBMP provide exams

	General	Part I	Part II	Part III
Written	Basic radiobiology Radiation protection nuclear physics Basic statistics	Radiation Measurement(40) Radiation Physics(40) Medical modality(20)	Radiation Biology(20) Radiation Protection(40) Anatomy& Physiology(20) Elective exam(20) <ol style="list-style-type: none"> 1) Radiation Oncology 2) Radiology 3) Nuclear medicine 	Diagnostic Radiologic Physics (100) Therapeutic Radiologic Physic (100) Medical Nuclear Physics (100)
Oral Exam	Radiation Protection and Patient Safety Patient-Related Measurements Image Acquisition, Processing and Display Calibration, Quality Control and Quality Assurance Equipment			

Eligibility

- ❖ Graduate degree in medical physics, physics, physical science or engineering
 - ❖ Complete an educational course work offered by KSMP
 - ❖ 3 years of full time clinical experience
 - ❖ 2 years of full time clinical experience if the candidate is trained from accredited residency program
- Certification from KSMP
 - ❖ 56 Certified board members
 - Certification from Aboard
 - ❖ 2 Certified MP in Therapy
 - Accreditation from Government
 - ❖ Processed by government!



Maintenance of Certification

- Established the regulation in April 1 2006
- Need to acquire: 10 credits CME/year
 - 4 credits from attending annual KSMP meeting
 - 2 credits from attending continuing medical education program offered by KSMP
- Cancel certification if the personnel does not meet the requirements (10 points/year) for the 3 years in a row

Credits

Subject	Credits	Limit
1. Attend KSMP Annual meeting	4 /meeting	-
2. Continuing medical education offered by KSMP	2 /participation	-
3. Attend Annual meeting of other related society	2 /participation	2
4. Paper publication	1 st /Corresponding author: 4 /paper Others: 2 /paper	4
5. Lecturers	2 /hr	4

In the Future, We need to

- Obtain accreditation from an International board
- Adoption of Medical Physics professional licensure
 - the Ministry of Science & Technology
 - the Ministry of Health and Welfare
- Two-Step Qualification
 - MP
 - Qualified MP
- CPT code for MP's work in hospital
- Offer specialized accreditation of medical physics educational programs for degree-granting programs, and improve the quality of accreditation for clinical residencies, continuing education and short courses

Acknowledgements

- Hee-Joung Kim, Ph.D (Yonsei University)
- Sung-Young Park, Ph.D. (National Cancer Center)
- Tae-Suk Suh (Catholic University of Korea)

Thank you for your
attention!