Master of Science in Medical Physics

medphys@sci.ui.ac.id
Program directives

Vision
To be a center of excellence in research, education, and training in medical physics in the national and international level

Mission
To develop the highest quality programs of teaching and research and to produce medical physics graduates to fulfill national and international demand

Prospectus
Alumnae of our program primarily excel in their career as clinical medical physicists, radiation protection experts, state regulators, national bureaucrats, as well as academics and researchers dealing with the advancing world of medical physics. Career as product experts at medical devices companies are promising as well.

Facilities
Students are entitled to all the facility of the Department, Faculty, and University. Access to library and online literatures (academic journals) are provided. The laboratories provide access for students to devices and tools for research. The equipment and practical are managed in 5 laboratories:
- Radiation Physics Laboratory
- Medical Physics Laboratory
- Treatment Planning Laboratory
- Computational Medical Physics Laboratory
- Biophysics Laboratory

Sharing Facilities
For clinical attachment and practical session, we collaborated with several hospitals through Memorandum of Understanding i.e. Cipto Mangunkusumo hospital, Dharmais Cancer Center, Siloam Hospital Semanggi, and Pasar Minggu hospital.

Faculty Members UI
Prof. Dr. Djarwani S. Soejoko | Medical physics and Biomedical Material
Prof. Dr. Neng Tine Kartinah | Pathology and Physiology
Supriyanto A. Pawiro, Ph.D. | Radiotherapy Physics
Dr. S. Dharmawati, Dwi Seno K. Sihono | Radiation Physics
Dr. S. Hardiansyah | Nuclear Medicine Physics
Nurely, Ph.D. | Biophysics, Biomedical Material, Biosensor
Prawito Prajitno, Ph.D. | Computational and Image Processing
Sastrasastro Wijaya, Ph.D. | Biomedical Instrumentation
Kristina Tri Wigati, MSc | Diagnostic Radiology Physics
Lukmanda Evan Lubis, MSc, F.Med | Diagnostic Radiology Physics
Akbar Azzi, MSc, F.Med | Radiotherapy Physics

Visiting Professors/Lecturers
Prof. Dr. Dietmar Georg | Medical University of Vienna, Austria
Prof. Dr. Wolfgang Birkfellner | Medical University of Vienna, Austria
Prof. Dr. Hilde Bosmans | Catholic University of Leuven, Belgium
Prof. Dr. Gerhard Glattling | Ulm University, Germany
Markus Stock, Ph.D. | Particle Therapy Center, MedAustron, Austria
M. Hafiz Zin, Ph.D. | USM / AMDI
Rafidah Zainon, Ph.D. | USM / AMDI
1st and 2nd Semester (Mandatory Courses – 20 credits)
- Patho-Anatomy, and Physiology (2 credits)
- Advanced Radiological Physics and Dosimetry (2 credits)
- Application of Radiobiology (2 credits)
- Medical Imaging Physics (2 credits)
- Radiotherapy Physics (2 credits)
- Computational Medical Physics (2 credits)
- Laboratory work (2 credits)
- Sensor and Biomedical Instrumentation (2 credits)
- Biomedical Physics (2 credits)
- Ethics of Medical and Clinical Medical Physics (2 credits)

2nd Semester (Elective Courses – 6 credits)
- **Radiotherapy Physics Track**
  - Imaging and Radiotherapy Planning Technology (3 credits)
  - Advanced Radiotherapy Techniques (3 credits)
  - Radiation Protection and Safety (2 credits)
- **Imaging and Nuclear Physics Track**
  - Advanced Medical Imaging Physics (3 credits)
  - Advanced Nuclear Medicine Physics (3 credits)
  - Radiation Protection and Safety (2 credits)
- **Biomedical Physics Track**
  - Bioelectromagnetism (2 credits)
  - Biomedical Materials (2 credits)
  - Biological Materials (2 credits)
  - Biomedical Optics (2 credits)

3rd Semester
- Scientific Publication (2 credits)

4th Semester
- Master Thesis (8 credits)

**Title Awarded**
Upon the completion of their study, students will be awarded the title Magister Sains (M.Si.)

**The Structure**
Master of Medical Physics study program UI is the first master medical physics study program in Indonesia. For details about master of medical physics study program, see http://https://physics.ui.ac.id/academic/master-in-medical-physics/

**CPD and training**
Students are able to take part in Continuing Professional Development programs in frequent workshops, seminars, and scientific forums held by the program in conjunction with national and international Medical Physics communities.

Opportunities to be involved in professional training (Clinically-Qualified Medical Physicist Residency training) is available for students. Students can be enrolled as residents either after graduation (regular residency) or during the studentship (hybrid program). The residency program complies with IAEA recommendations.
Entry requirements
For admission into M.Sc. in Medical Physics study program, applicants must have at least an undergraduate degree in Physics or Nuclear Engineering with strong foundation in Physics and Mathematics.

Application procedure
Admission exam is held by Universitas Indonesia’s central admission office. For schedules and procedures, see http://penerimaan.ui.ac.id/ or http://international.ui.ac.id/.

Funding opportunities
- Research Grant: consumable goods, national or international seminar and publication fee
- CMPB-UI Fellowship: Partial tuition fee
- Potential source funding: IAEA Marie Curie Fellowship Program, DEXA scholarship, IsDB scholarship, Ministry of Health Scholarship Program, Beasiswa Unggulan, and LPDP scholarship

Further information
For detailed information regarding admission procedure:
Universitas Indonesia Central Admission Office
Gedung PMB UI (ex.BNI)
Kampus UI Depok, 16424
Tel: (+6221) 78849129, 7864126, 78849104
E-mail: penerimaan@ui.ac.id

For information on Medical Physics :
Master of Medical Physics Study Program
Department of Physics, FMIPA UI
Kampus UI Depok, 16424
E-mail: mag.fismed@sci.ui.ac.id