

# UNIVERSITY OF PATRAS

## School of Medicine

### CHAIRPERSON

Professor Charalambos Gogos  
Tel: +30 2610 999323 / 993396  
E-mail: [cgogos@med.upatras.gr](mailto:cgogos@med.upatras.gr)

### SECRETARIAT

University Campus  
Hippocratous Asklipiou St.  
Tel.: +30 2610 969100-108, 969114, 992942  
Fax: +30 2610 996103  
<http://www.med.upatras.gr/en/Pages/default.aspx>  
<http://www.med.upatras.gr/gr/Pages/default.aspx>

### BRIEF HISTORY

The Faculty of Medicine of the University of Patras was established in 1977 and admitted its first students in October of the same year. During its 31 years of operation, 2925 students have graduated with a medical degree and several hundreds have received post-graduate doctoral diplomas. During the academic year 2010-2011 the Faculty of Medicine admitted 189 students. The School includes 152 faculty members and 46 administrative personnel and technicians. The pre-clinical activities are housed in a new 20.000 m<sup>2</sup> building while the clinical units occupy a 750 bed University Hospital next to the pre – clinical building. A new building is under construction where the research laboratories of the Clinical Departments will be housed. The medical complex includes also a building where the teaching amphitheatres and the medical library are located. The undergraduate curriculum lasts for 12 semesters, loosely divided in a preclinical and a clinical part. The Faculty of Medicine is divided in seven divisions. Each division is comprised of several academic units (Departments).

### DIVISIONS

1. Division of Basic Sciences I
2. Division of Basic Sciences II
3. Division of Clinical Laboratories
4. Division of Medicine I
5. Division of Medicine II
6. Division of Surgery
7. Division of Paediatrics & Obstetrics – Gynaecology

### DEPARTMENTS

- Department of General Biology
- Department of Biological Chemistry
- Department of Medical Physics
- Department of Anatomy
- Department of General Pharmacology

- Department of Physiology
- Department of Radiology
- Department of Microbiology
- Department of Pathology
- Department of Public Health
- Department of Nuclear Medicine
- Department of Internal Medicine
- Department of Neurology
- Department of Psychiatry
- Department of Dermatology
- Department of Surgery
- Department of Vascular Surgery
- Department of Anaesthesiology and Intensive Care
- Department of Ophthalmology
- Department of Urology
- Department of Neurosurgery
- Department of Otorinolaryngology
- Department of Orthopaedics
- Department of Paediatrics
- Department of Obstetrics and Gynaecology
- Department of Cardiothoracic Surgery
- Department of Paediatric Surgery
- Department of Rehabilitation

### **UNDERGRADUATE STUDIES**

The Education objectives of the Medical Curriculum are twofold: First, to educate the future Physicians in the biological and medical sciences underlying the practice of medicine and to help them develop the medical skills necessary for the efficient and effective treatment of patients. But an equally important objective is to install to the students the values and the ethical principles which are necessary for the practice of medical profession.

**C U R R I C U L U M**  
**ACADEMIC YEAR 2010-2011**

<http://www.med.upatras.gr/en/Pages/undergrad/courses.aspx>  
<http://www.med.upatras.gr/gr/Pages/undergrad/courses.aspx>

**FIRST YEAR – FIRST (FALL) SEMESTER**

REQUIRED COURSES	HOURS/WEEK		ECTS	TOTAL HOURS	
	Lect.	Lab.		Lect.	Lab.
Biology I	3	3	6	42	42
Biochemistry I	3	3	6	42	42
Medical Physics	3	3	6	42	42
Biostatistics	2	2	4	28	28
Medical Informatics	2	2	4	28	28
Introduction to Clinical Medicine	2	-	2	28	-

**FIRST YEAR – SECOND (SPRING) SEMESTER**

REQUIRED COURSES	HOURS/WEEK		ECTS	TOTAL HOURS	
	Lect.	Lab.		Lect.	Lab.
Biology II	3	3	6	42	42
Biochemistry II	3	3	6	42	42
Anatomy I	3	3	6	42	42
Histology - Embryology I	2	2	4	28	28
Physiology I	3	3	6	42	42
Clinical skills CPR	-	2	2	-	28

**SECOND YEAR – FIRST (FALL) SEMESTER**

REQUIRED COURSES	HOURS/WEEK		ECTS	TOTAL HOURS	
	Lect.	Lab.		Lect.	Lab.
Anatomy II	4	3	7	56	42
Histology-Embryology II	2	2	4	28	28

Biochemistry III	3	3	6	42	42
Physiology II	5	3	8	70	42
Clinical Skills I	----	2	2	-----	28

## SECOND YEAR – SECOND (SPRING) SEMESTER

REQUIRED COURSES	HOURS/WEEK		ECTS	TOTAL HOURS	
	Lect.	Lab.		Lect.	Lab.
Neurosciences	4	3	7	56	42
Public Health I	2	2	4	28	28
Pharmacology I	3	2	5	42	28
Microbiology I	3	3	6	42	42
Pathology I	4	3	7	56	42
Clinical Skills II	-----	2	2	-----	28

## THIRD YEAR – FIRST (FALL) SEMESTER

REQUIRED COURSES	HOURS/WEEK		ECTS	TOTAL HOURS	
	Lect.	Lab.		Lect.	Lab.
Pathology II	4	3	7	56	42
Bioethics	1	2	3	14	28
Pharmacology II	3	2	5	42	28
Microbiology II	3	3	6	42	42
Clinical Skills III	----	2	2	-----	28

## ELECTIVE COURSES

*(Students are required to take one course)*

ELECTIVE COURSES	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Introduction to Laboratory Hematology & Transfusion	2	14	2	28
Clinical Neuroanatomy – Molecular Anatomy	2	14	2	28
Pharmacogenomics	2	14	2	28
Medical Genetics	2	14	2	28
Clinical Biochemistry	2	14	2	28
Molecular and Genetic	2	14	2	28

Epidemiology				
Physiology and biology of stem cells – applications in regenerative medicine	2	14	2	28
Neurobiology of mnemonic functions	2	14	2	28
Pathobiology of bone tissue diseases	2	14		28

### **THIRD YEAR – SECOND (SPRING) SEMESTER INTEGRATION I**

REQUIRED COURSES	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Introduction to Radiology	25	1	1	25
Cardiovascular diseases	25	2	1	50
Respiratory diseases	25	2	1	50
Hematology	25	2	1	50
Gastroenterology	25	2	1	50
Connective tissue diseases	25	2	1	50
Nephrology	25	1,5	1	35
Dermatology	25	1,5	1	35

### **FOURTH YEAR – FIRST (FALL) SEMESTER INTEGRATION II**

REQUIRED COURSES	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Endocrinology	25	2	1	50
Neurology	23	1,5	1	35
Psychiatry	27	1,5	1	40
Obstetrics-Gynaecology	25	2	1	50
Paediatrics	25	2	1	50
Toxicology trauma	25	1	1	25
FUO Infectious Diseases	25	2	1	50

Oncology				
Community medicine	25	1	1	25

## FOURTH YEAR – SECOND (SPRING) SEMESTER

Required Courses	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Ophthalmology	25	2	6	50
Otorhinolaryngology	25	2	6	50
Radiology	25	2	6	50
Orthopaedics	25	2	6	50
Urology	25	2	6	50

## ELECTIVE COURSES (Students are required to take one course)

Elective Courses	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Introduction to Cardiothoracic Surgery	25	1	1	25
Solid Organ Transplantation	25	1	1	25
Occupational and Environmental Medicine	25	1	1	25
Introduction to Nuclear Medicine	25	1	1	25
Pediatric & Reproductive Endocrinology	25	1	1	25
Fetal-Maternal Medicine	25		1	25

## FIFTH YEAR - CLERKSHIPS

REQUIRED COURSES	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Internal Medicine (includ. Cardiology/Nephrology)	35	8	10	280
Paediatrics	35	4	5	140
Surgery (includ. 2 weeks /Intensive Care & 2 weeks Orthopaedics)	35	8	10	280
Obstetrics-	35	4	5	140

Gynaecology				
Psychiatry *	35	4	5	140
Neurology * (includ. 1 week Neurosurgery)	35	4	5	140

## SIXTH YEAR - CLERKSHIPS

REQUIRED COURSES	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Internal Medicine*	35	6	8	210
Surgery *	35	6	8	210
Paediatrics *	35	6	8	210
Obstetrics- Gynaecology	35	3	4	105
Ophthalmology	35	2	4	70
Otorhinolaryngology	35	2	4	70
<i>Elective Course</i>	35	2	2	70
<i>Elective Course</i>	35	2	2	70
<i>Elective Course</i>	35	2	2	70

## Elective Courses (Students are required to take three electives)

ELECTIVE COURSES	HOURS/WEEK	WEEKS	ECTS	TOTAL HOURS
Otorhinolaryngology	35	2	2	70
Urology	35	2	2	70
Ophthalmology	35	2	2	70
Cardiology	35	2	2	70
Microbiology	35	2	2	70
Pathology	35	2	2	70
Dermatology	35	2	2	70
Orthopaedics	35	2	2	70
Intensive Care	35	2	2	70
Hematology	35	2	2	70
Endocrinology	35	2	2	70
Nephrology	35	2	2	70
Gastroenterology	35	2	2	70
Rheumatology	35	2	2	70
Infectious Diseases	35	2	2	70
Pulmonary Diseases	35	2	2	70

Oncology	35	2	2	70
Cardiothoracic Surgery	35	2	2	70
Immunohaematology	35	2	2	70
Neurosurgery	35	2	2	70
Radiobiology & Radiation Oncology (Clinical Training)	35	2	2	70
Andrology (Clinical Training)	35	2	2	70



## **POSTGRADUATE STUDIES**

### **A. "Clinical & Clinical-Laboratory Medical Specialties".**

The Medical School organizes and operates a postgraduate studies programme entitled "Clinical & Clinical-Laboratory Medical Specialties"  
<http://www.med.upatras.gr/gr/Pages/postgrad/postgraduatedProgs.aspx?plD=2>

#### **Object - Purpose**

The object of the postgraduate studies is the award of a PhD in Clinical & Clinical-Laboratory Medical Specialties. The main purpose of the postgraduate programme is the preparation of doctors who will have the ability of self-reliant advancing of scientific medical research and thought, and will contribute to the fulfillment of the educational, research and sanitary needs of the country, in the context of the rapidly changing and evolving Medical Science and Technology.

The programme is expected to have two cycles of studies:

- Basic cycle of studies
- Clinical cycle of studies

#### **Postgraduate Titles**

The Medical School Programme leads to the award of a PhD on the subjects of Clinical & Clinical-Laboratory Medical Specialties.

#### **Graduate Categories**

In the Postgraduate Studies Programme admissible are graduates of Medical Schools / Departments of Greece, as well as graduates of equivalent and acknowledged Medical Schools of foreign countries (with an acknowledged title of DIKATSA). Also, admissible are graduates of similar Departments in Greece and foreign countries contextual with the current provisions, the certificates of whom involve scientific subjects in which at least one faculty member, with a corresponding subject serves at the Medical Department of the University.

#### **Duration**

The duration for the award of PhD is determined to at least six and at most twelve tutorial semesters. An extension of these periods is not generally allowed. By exception, in particular situations, a small extension may be provided after a justified decision of the General Assembly for Educational Issues.

Also, an interruption of attendance is possible with the decision of the Department's General Assembly for Educational Issues, after a justified application by the student in question. During this interruption all the postgraduate student's rights are suspended.

### **B. "Basic Medical Sciences"**

The Faculty of Medicine offers graduate program in Basic Medical Sciences leading to degrees of Master of Science lasting at least two years and Doctor of Philosophy lasting at

least three. The areas covered by the Program include: Pathobiochemistry, Molecular Genetics and Cytogenetics, Neurosciences, Pharmacokinetics and Toxicology and Molecular Biology.

<http://www.med.upatras.gr/gr/Pages/postgrad/postgraduatedProgs.aspx?plD=1>

<http://bie.med.upatras.gr/default.aspx>

To be admitted as a graduate student, an applicant must have received a Bachelor's degree or its equivalent from a accredited Higher education Institution in the fields of Life Sciences, Natural Sciences, or School of Engineering.

There are two conditions that international applicants should fulfil.

1. Have their degree approved by DOATAP<sup>(1)</sup>.
2. Have fluency in spoken and written Greek since the lectures are mostly in Greek at the moment.

The program's standards for admission are the Academic records<sup>(2)</sup>, three letters of recommendation<sup>(3)</sup>, a strong background in basic sciences and are required to appear for an interview

### **C. Interuniversity Postgraduate Course in “Biomedical Engineering”**

The Department of Medical Physics of the University of Patras, Greece, has been coordinating since 1989 a European Postgraduate Course in BME in collaboration with 25 European Universities. This Course draws expertise from a large multinational academic community and addresses a respective multinational audience.

<http://bme.med.upatras.gr/>

<http://www.med.upatras.gr/gr/Pages/postgrad/postgraduatedProgs.aspx?plD=16>

Since 1994, this Course has been established as an Interuniversity Postgraduate Course in “Biomedical Engineering” in collaboration with the Faculty of Electrical and Computer Engineering and the Faculty of Mechanical Engineering of the National Technical University of Athens.

The Interuniversity Postgraduate Course leads to the acquisition of Master and PhD degrees in Biomedical Engineering.

#### **Admission of Students**

Students admitted to attend the Interuniversity Postgraduate Course after an announcement and a selection are mostly graduate Engineers or doctors, as well as graduates of other related Faculties of Greek or foreign Universities.

#### **Duration**

The duration of studies for the MSc is four (4) academic semesters. The first and second semesters include mostly lectures, laboratories and exams. The following two semesters are mainly dedicated to the writing, the presentation and the evaluation of the Master's thesis.

After the completion of their postgraduate studies, the students who have been selected may continue for a PhD for at least four (4) academic semesters which include further education as well as the writing of a doctorate thesis. The content of the education depends on the thesis' subject.

The maximum duration of studies is three (3) years for the MSc and five (5) years for the PhD.

#### **D. Interdepartmental Postgraduate Course in Medical Physics**

<http://www.med.upatras.gr/gr/Pages/postgrad/postgraduatedProgs.aspx?plD=4>

<http://physics.med.upatras.gr/default.htm>

The postgraduate program in Medical Physics (MP) was initiated in 1988 and has been the first program in Greece officially offering a Master's degree (1993). It has recently been revised with respect to both its curriculum structure and to its operational aspects, towards the following two goals:

- to meet international Medical Physics studies accreditation specifications
- to cover the emerging occupational challenges for Medical Physicists working in Hospital Information Systems environments

For this purpose **two directions** have been implemented in the Program. The first is dealing mainly with the traditional Medical Physics matters of the study of the interaction of ionizing radiation with the human body, while the other is concerned with aspects of (tele-)processing and analysis of biomedical signals and images.

The Course leads to the following degrees:

- Master's of Science (MSc)
- Doctor of Philosophy (PhD)

The course is organized into 3 academic terms:

**FIRST TERM:** Physics in Medicine and Biology, Basic Medical Sciences I (Anatomy, Biochemistry, Biology), Basic Medical Sciences II (Physiology, Pathophysiology), Biomedical Electronics and Biomedical Signal Processing, Research Methodology, Biostatistics

**SECOND TERM:** Radiation - matter interaction and Dosimetry, Radiobiology and Radiation Protection, Physics of Nuclear Medicine & Internal Dosimetry, Physics of Diagnostic Radiology & Ultrasonography, Methods and techniques of Medical Image Processing & Analysis, Physics of Radiation Therapy I, Medical Image Analysis & Pattern Recognition, Lasers and applications in Medicine

**THIRD TERM:** Biosignal analysis, Physics of Radiation Therapy II, Magnetic Resonance Imaging & Spectroscopy, Advanced topics in Physics of Diagnostic Radiology, Medical image transfer and Teleprocessing, Medical Databases & data mining

Lessons of Term 1 and Term 2 are compulsory and correspond to 47 credits. Lessons of Term 3 are optional. Postgraduate students are expected to collect at least 55 credits from the entire course of lessons. The Master's thesis (compulsory) corresponds to further 45 credits. A minimum total of 100 credits is required for graduation.

#### **Candidate students**

Accepted for registration at MP are selected graduates from Departments of Physics, Medicine, Electrical Engineering, Computer Engineering, Informatics and related Departments of Greek Universities and Technical Institutions or Departments of congener non-Greek Institutions, according to Greek legislation for recognition of studies.

#### **Duration of Studies in MP**

Studies towards MSc in MP are set to have a minimum duration of 4 academic semesters and a maximum of 6 semesters. Studies towards PhD are set to have a minimum duration of 6 and a maximum of 10 semesters (from beginning of studies).

## **E. Interdepartmental Postgraduate Course in “Informatics for Life Sciences”**

The Departments of Medicine, Pharmaceutics, Biology, Physics and Software Engineering of University of Patras organize and run since academic year 2003-04 the Interdepartmental Program of Graduate Studies in “Informatics for Life Sciences” (ILS) <http://www.med.upatras.gr/gr/Pages/postgrad/postgraduatedProgs.aspx?plD=5>  
<http://www.pez.upatras.gr/>

### **Object and Objectives**

ILS aims to advance higher education of graduates University Departments related to either Informatics or Life Sciences into the new hybrid discipline, ILS, which is defined as the interdisciplinary branch, which uses informatics and computer technology in order to solve problems of Life Sciences (i.e. software tools for data handling and analysis, databases, models etc.). There is a plethora and heterogeneity of such problems, as well as a dynamic feedback interaction between solving them and further developing new ways to tackle such problems (i.e. genetic algorithms, neuronal computers). The title of ILS reflects the breadth of the teaching and research subject. We want it to include both academically and established directions, like bioinformatics and medical informatics and new dynamically developing directions like neuroinformatics and others

### **Graduate Degrees**

ILS leads to

1. M. Sc. degree in ILS with 3 alternative directions:
  - a. bioinformatics
  - c. medical informatics
  - b. neuroinformatics
2. Philosophy Doctor

### **Candidate students**

Accepted for registration register at ILS are selected graduates from University departments of either Life Sciences or Informatics and related Departments of Greek Universities and Technical Institutions according to article 5, paragraph 12g of law 2916/2001, or corresponding Departments of congener foreign Institutions, whose degrees have been recognized by DOATAP.

### **Duration of Studies in ILS**

Studies towards a M.Sc. in ILS are set to have a minimum duration of 4 academic semesters including the Diploma Thesis and a maximum of 8 semesters. Studies towards a Ph. D. will take a minimum of 8 semesters (the time spent for obtaining a M.Sc. in ILS counting as 4 semesters).