



**UNIVERSITY OF MEDICINE  
AND PHARMACY OF CRAIOVA**



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2, Petru Rares Street, 200349, Craiova, Dolj, Tel. (+40) 0251 522 458, Fax. (+40) 0251 593 077  
Email: [rector@umfcv.ro](mailto:rector@umfcv.ro), [intrel@umfcv.ro](mailto:intrel@umfcv.ro)



**We are pleased to advertise our Master Degree Program  
in Medical Informatics and Biostatistics.**

**Romanian and international students are welcome  
to attend.**

**Objective**

**MASTER DEGREE IN MEDICAL INFORMATICS &  
BIOSTATISTICS (MDMI&B)**

**In more and more countries, also in Romania, Medical Informatics & Biostatistics is an officially recognized profession, thus offering access to a very interesting and promising emerging segment of the labor market.**

***More and more medical institutions, all over the world, need highly trained personnel, specialized in Informatics and Biostatistics, need managers to understand and master the new tools and techniques in order to optimize the enterprise, need researchers able to develop and demonstrate concepts, to master complex tools and to develop new tools.***

*Our program is open to graduates in Medicine who want to improve their chance to get into the area of health management, to develop skills at the interface with Informatics and Biostatistics as tools to master medical data, or who want to develop a profile as a researcher and thus to improve their chance on the international arena.*

*The program is also open to graduates from other fields (Engineering and Business Administration, Mathematics, Informatics, etc.) who want to improve their chance to get into the area of health management, to develop skills at the interface with Informatics and Biostatistics as tools to master medical data, who want to develop a profile as a researcher and thus to improve their chance on the international arena, who want to get specialized into a highly interdisciplinary area.*

Within a progressively dynamic world where a challenging labor market asks for

- (i) higher specialization in interdisciplinary areas together with

- (ii) a wider professional horizon, to enable the individual to adapt to specific requirements,
- (iii) original thinking and capacity to develop nonstandard solutions,
- (i) the ability to leading change,

**the objectives of our program are:**

- (i) To provide our students up-to-date knowledge and proficiency in cutting edge tools at the border between Informatics, Biostatistics and Medicine, to serve Medicine;
- (ii) To encourage and help our students to develop and apply original thinking;
- (iii) To provide our students a serious formation as researchers and managers, through systematic training to develop concepts, to design and perform experiments, to pursue experiments, process complex data, draw conclusions;
- (iv) To help our students to develop the ability to leading change and managerial qualities.

**These objectives will be reached through**

- (i) high quality teaching covering a modern curricula,
- (ii) project oriented practical involvement in all aspects of the curricula,
- (iii) team oriented work,
- (iv) the possibility to get involved in international cooperation,
- (v) training on how and where to apply for jobs within the field, on how to improve the personal rating through this process
- (vi) practical approach to progressively increase the personal rating and chance on a dynamic labor market.

**Duration**      2 years, 4 semesters

**Language** English

**Prerequisites**

- Any student who can provide proof (diploma) of undergraduate or graduate studies in medicine, computer science, mathematics, informatics, electrical engineering, mechanical engineering, economic studies, may attend, on a competitive basis.
- Proved Proficiency in English
- Basic knowledge in elementary high school mathematics
- Basic experience with computers, i.e. managing:
  - the data structure on a PC (e.g. using Windows Explorer),
  - spreadsheets (Excel),
  - word processing (Word)
  - data bases (Access)
  - presentations in PowerPoint

**Admission Deadline for submissions: August 15<sup>th</sup> 2005**

- Candidates will be evaluated on the basis of a personal file (Curriculum Vitae, Cover Letter, Diploma, Transcript of records, proved proficiency in English, two recommendations from previous mentors, copy of birth certificate, two photographs  $\frac{3}{4}$  cm) and possibly an interview, when necessary.

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**Email** [rector@umfcv.ro](mailto:rector@umfcv.ro) [intrel@umfcv.ro](mailto:intrel@umfcv.ro) [mtarata@umfcv.ro](mailto:mtarata@umfcv.ro)

**Presentation of the program**

Medical Informatics is an area of explosive development now, offering a real chance on the labor market. Due to our educational experience and research accomplishments, we offer high quality scientific background and practically oriented higher education to Romanian and international students who want serious training and a real chance on the international market in an area at the border between health care and informatics, to the service of health care.



As an institution, we are in honest and serious competition with other universities, with the intent to progressively improve our ratings and the quality of the education we are offering to our students. This means ongoing development toward ever-higher standards of quality. To this purpose, our curriculum covers modern topics; our students are encouraged to study and work, to be able to master the tools, to be able to build new informatic tools, to be able to assist the medical staff in a high quality medical act, to the benefit of the patient.



An international academic staff will teach modules of courses and practicals, and will share their international experience with the students (Elia El Darzi, Westminster University, London, UK; Constantinos Pattichis, University of Cyprus, Nicosia, Cyprus; Albert Guvenis, Bogazici University, Istanbul, Turkey; Mihai Tarata, The University of Medicine and Pharmacy of Craiova, Romania; Florin Gorunescu, The University of Medicine and Pharmacy of Craiova, Romania). Other outstanding Romanian and international scientists will deliver modules of courses.

The Master Degree in Medical Informatics & Biostatistics is strongly oriented toward research, with the immediate aim to provide to the students the necessary formation as researchers, to stimulate and motivate open minded, creative, flexible individuals.

In bringing together students with different professional and cultural backgrounds, though challenging, our program offers to the students committed to hard work, a maximal chance to personal achievement and development.

An unique feature of our program is to work within an academic and practical medical environment, which offers full immersion in the real medical life, making thus our proximity to and cooperation with the regional hospital where many university clinics are located, a real asset in the immediate benefit of our students. This is a unique feature of our master degree program.



**UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA**  
 Faculty of Medicine  
**MASTER DEGREE IN MEDICAL INFORMATICS AND BIOSTATISTICS**

Subject	Subject	Semester I			Semester II			Semester III			Semester IV						
		C	S	L	T	Cr	C	S	L	T	Cr	C	S	L	T	Cr	
IMB MCS 101	METHODOLOGY OF SCIENTIFIC RESEARCH	1	1	2	3												
IMB NFM 102	FUNDAMENTAL KNOWLEDGE IN MEDICINE	2	1	3	6												
IMB PCS1 103	PROGRAMMING IN MATLAB FOR SCIENTIFIC RESEARCH	2	2	4	7												
IMB PSB1 104	BIOMEDICAL SIGNAL PROCESSING	2	2	4	7												
IMB BS1 105	BIOSTATISTICS AND EXPERIMENTAL DESIGN I	2	1	3	7												
IMB PIM 201	MEDICAL IMAGE PROCESSING					2	2	4	8								
IMB BS2 202	BIOSTATISTICS AND EXPERIMENTAL DESIGN II					2	2	4	7								
IMB BDM 203	DATA BASES & INFORMATION SYSTEMS IN HEALTH CARE					2	2	4	7								
IMB PSB2 204	ADVANCED BIOMEDICAL SIGNAL PROCESSING					2	2	4	8								
IMB PCS2 301	ADVANCED PROGRAMMING IN MATLAB FOR RESEARCH						2	2	4	6							
IMB MM 302	DETERMINISTIC & STOCHASTIC MODELING IN HEALTH CARE						2	1	3	6							
IMB NTM 303	TELEMEDICINE. E-HEALTH						2	2	4	8							
IMB IAM 304	ELEMENTS OF ARTIFICIAL INTELLIGENCE IN HEALTH CARE						2	1	3	6							
IMB ISS 305	INFORMATIC SYSTEMS IN HEALTH CARE						1	1	2	4							
IMB DMM 401	DATA MINING IN HEALTH CARE										2	2	4	9			
IMB DMS 402	THE MANAGEMENT OF HEALTH CARE										2	1	3	6			
IMB ISI 403	THE DESIGN OF INFORMATION SYSTEMS IN HEALTH CARE										3	4	7	11			
IMB NEE 404	INTRODUCTORY EPIDEMIOLOGY										1	1	2	4			
PREP. DISSERTATION		9	7	16	30	8	8	16	30	9	7	16	30	8	8	16	30
Semester IV																	
WEEKLY HOURS/SEMESTER/CREDITS		16/224/30			16/224/30			16/224/30			16/224/30			16/224/30			
C- COURSES. I. - PRACTICALS. I. - TOTAL. CR. - CREDITS																	

**Tuition fees**

**FULL-FEE PAYING STUDENT:** 380 USD per month (three hundred and eighty United States Dollars per month).

**ROMANIAN students:** 35 mil. Lei (ROL old currency) or 3500 Lei (RON new currency) per year.

### **Accommodation**

The University of Medicine and Pharmacy of Craiova has a campus with shared facilities. The University has two hostels where 840 students are lodged at low costs. Foreign students must pay 50 USD per month.



University Refectory



University hostel room



Study hall



University Library

### **Cost of living**

Estimation of a monthly budget:

Accommodation: 50 USD (in the university campus) – 300 USD (at private hostels), as an average.

Meals: 100 – 200 USD

Public Transport: 10 – 50 USD

## **Academic environment**

**The University of Medicine and Pharmacy of Craiova is an active member of the European Network of Medical Schools and cooperates under the ERASMUS scheme with a growing number of European countries, as Belgium, France, Germany, Greece, Italy, Netherlands, Portugal.**

**We have strong scientific cooperation with outstanding universities world wide, as**

- *Iowa State University, Ames, USA,*
- *University of Westminster, London, U.K.*
- *Faculdade de Medicina, Instituto de Fisiologia, University of Lisbon, Lisbon, Portugal,*
- *Universitaet der Bundeswehr, Institute of Mathematics and Data Processing, Munchen, Germany,*
- *Katholieke Universiteit Leuven, Belgium,*
- *Timisoara University of Medicine and Pharmacy , Romania,*
- *University of Patras, Greece,*
- *University of Cyprus, Nicosia, Cyprus*
- *Tucson University, Arizona, USA,*
- *University of Leeds, England, U.K.,*
- *Ernst- Moritz-Arndt Universitaet Greifswald, Germany,*
- *Universite de Mons – Hainaut, Belgium,*
- *Universita Degli Studi di Torino, Facolta de Medicina, Italy,*
- *Universite Rene Descartes, Paris, France,*
- *Universite Pierre et Marie Curie, Paris, France,*
- *Aristotle University of Thessaloniki, Greece,*
- *University of Maastricht, Holland*
- *Bogazici University, Istanbul, Turkey*

The University of Medicine and Pharmacy of Craiova has links with important European associations like: AMEE (Association of Medical Education in Europe), AMSE (Association of Medical Schools in Europe), IIME (International Institution of Medical Education), CRE (l'Association des Universités Européennes), AUPELF-UREF (Agence Francophone pour l'Enseignement Supérieur et la Recherche), CIDMEF (Conférence Internationale des Doyens de Facultés de Médecine d'Expression Française).

The University of Medicine and Pharmacy of Craiova has showed a constant interest to partnership with others universities in Romania and abroad. Our University is strategically interested in bilateral agreements with partner institutions. We are an active link into different networks like MED-NET 2, S.I.D.A.- NET, Comp-Uni and Regional-NET.

We consider every international student a special individual and are eager to assist him or her. We are proud that over 20 different countries are represented on our campus.

Medical Students Society Craiova or SSMC is functioning since 1990 and is a founding member of IFMSA – Romania.

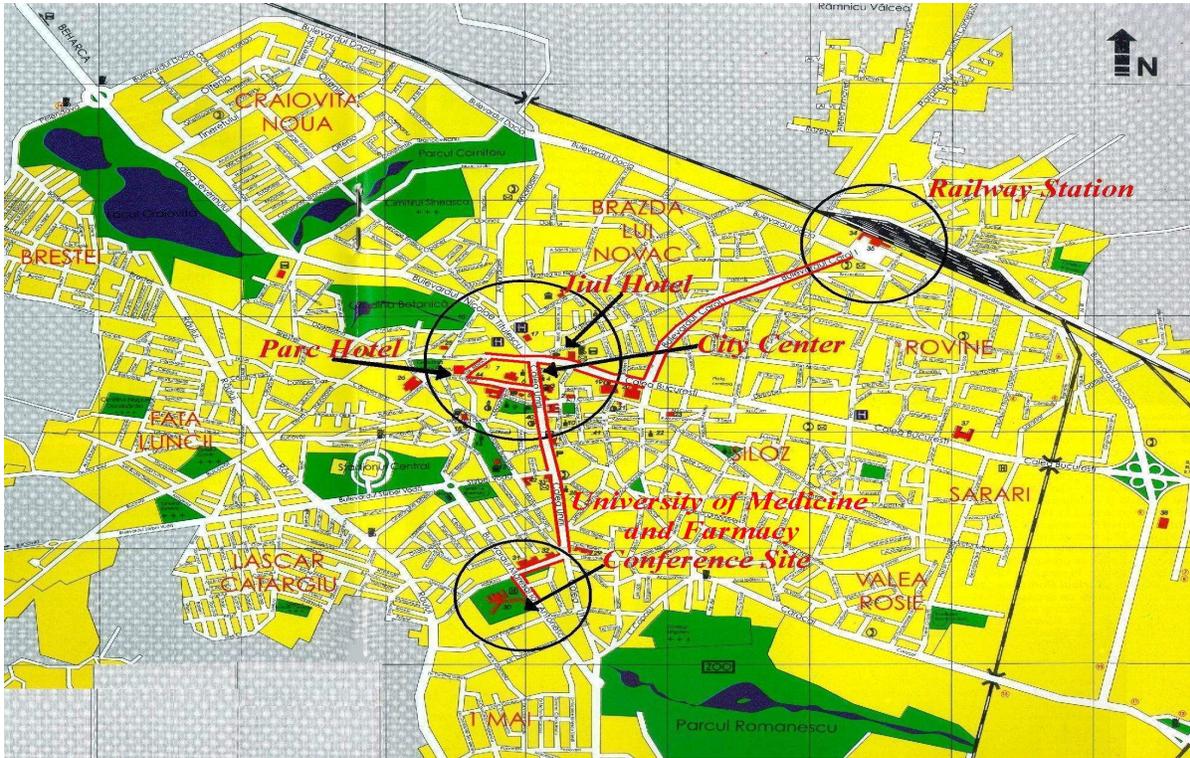
The Organization has eight local committees which organize projects and take part in international activities. They deal with:

- student exchange (SCOPE – Standing Committee on Professional Exchange and SCORE – Standing Committee on Research Exchange)
- Public Health issues (SCOPH – Standing Committee on Public Health)
- reproductive health and AIDS activities (SCORA – Standing Committee on Reproductive Health and AIDS)
- medical education projects (SCOME – Standing Committee on Medical Education)
- refugees support and promotion of peace.

**IMPORTANT!** English is well spoken in Romania, mainly by younger generations. You will feel at home with English.

## **Travel**

From Otopeni Airport Bucharest take the bus to **Gara de Nord (North Railway station in Bucharest)**. The train runs about 3 hours to Craiova Railway Station then you take the bus no. 1 and get off at No. 1 Hospital or the taxi. The taxi price is about 20 Euro cents (from the Railway Station to The University of Medicine and Pharmacy).



Craiova City map



## **Romania – at a glance**

Romania is located in South-Eastern Central Europe, North of the Balkan Peninsula, on the Lower Danube, within and outside the Carpathian arch, bordering on the Black Sea. Three elements have decisively marked the destiny of this area: the Carpathian Mountains, the Lower Danube and the opening to the Black Sea. With their arched form, the Carpathians determined the position of three big historical regions - the intra-Carpathian space, opening to Central Europe, the area east of the mountains, opening to the North Pontic steppes and the one south of the mountains, facing the Balkan Peninsula.

### **Area Distribution**

Agricultural area (39.2%), forests (28%), pastures and hayfields (20.5%), vineyards and orchards (2.3%), buildings, roads and railways (4.5%), waters and ponds (3.7%), other areas (1.8%).

**Capital city:** Bucharest

**Climate:** temperate-continental, four seasons

**Features:** mountains, hills, plains and delta, sea side

**Population:** 21,680,976 (March 2003, source: National Statistics Institute)

**Currency:** ROL (Romanian Leu) or RON (Romanian New Leu)

10,000 ROL = 1 RON = 0.36 EURO

**Language:** Romanian, closely related to other Latin languages: Italian, Portuguese, French, Spanish.

### **Craiova City Cultural Life**

There are many establishments of culture in Craiova. The National Theatre (set up in 1852 which is now well known all over the world), the Punch and Judy Show (1956), the "Oltenia Philharmonic Orchestra" (set up in 1947; host of some important national and international festivals), the "Lyrical Theatre" (1972, that became "Elena Theodorini" Opera and Operetta Theatre in 1996).

The libraries of Craiova are important elements of the cultural life of the town. The first public library of Craiova was set up in 1840. The most important libraries of the town are the "Alexandru and Aristia Aman" County Library, the University of Craiova Library, the University of Medicine and Pharmacy of Craiova Documentation Center, the German Library and "Omnia" French Library.

Even if there had been many art antiquaries in Craiova, the first museum was set up in 1908. We can visit today many art exhibitions, history and archaeology exhibitions, ethnography exhibition, natural science exhibition etc.

The 7<sup>th</sup> art cinematography early penetrated in Craiova. We mention the fact that only 2 years after the first world cinema performance, achieved by Lumiere brothers in Paris, there where presented short movies in Craiova. The curiosity became interest and passion regarding this new art; so that in 1915, there were 5 cinemas in Craiova. Craiova gave to the world cinematography many genuine virtuosos that became stars: Jenny Holt (Ecaterina Vladescu Olt), Polla Illery (Paula Iliescu), Elisa la Porta (Eliza Strainul), the director Jean Negulescu (well known at Hollywood).

Here is a short list of the most important personalities of this town:

**Petrache Poenaru** (1799-1875), the founder of the national colleges of Bucharest and Craiova, the leader of the education in the country during 3 decades, the inventor of the fountain-pen;

**Diplomat Nicolae Titulescu**, the unique diplomat who was twice elected in 1930 and 1931 the President of the United Nations League, member of the Romanian Academy, Doctor Honoris Causa of the Universities of Athens and Bratislava, President of The International Diplomatic Academy;

**Engineer Gogu Constantinescu**, inventor, the creator of the science of sonicity;

**Scientist Henri Coanda**, inventor of the jet, the father of "the Coanda effect", important member of the Royal British Academy;

**Mathematicians** Gheorghe Titeica and Traian Lalescu;

**Astronomer** Nicolae Coculescu, the founder of the Astronomical Observatory of Bucharest, laureate of the Academy of Science of Paris;

**Physicians** Dimitrie Gerota, Demetru Paulian;

**Writers** Alexandru Macedonski, Traian Demetrescu, Gib I. Mihaescu, Alexandru Mitru, Marin Sorescu;

**Philosopher** C. Radulescu-Motru former president of the Romanian Academy;

The well-known **sculptor** Constantin Brancusi, famous artist;

**Painters** Theodor Aman, Constantin Lecca, Eustatiu Stoenescu, Ion Tuculescu;

**Composer** Ion Vasilescu;

**Tenor** Grigore Gabrielescu ...

<http://www.umfcv.ro/en/ScientificEvents/Medinf2003/index.html>

or you can visit the following web site: [www.craiova.ro](http://www.craiova.ro)