



CALENDAR CONCURS
OCUPARE POSTURI DIDACTICE ȘI DE CERCETARE VACANTE,
PERIOADĂ NEDETERMINATĂ - Sem. II, 2022 - 2023
(Monitorul Oficial al României, Partea a III-a, nr. 152/24.04.2023)

1. Concursul se desfășoară în perioada **Aprilie - Iulie 2023**, în conformitate cu prevederile Legii Educației Naționale nr. 1/2011, cu modificările și completările ulterioare, HG nr. 457/2011, cu modificările și completările ulterioare, Legea nr. 319 / 2003, OUG 92/2012, HG nr. 36/2013, OUG nr. 117/2013, OUG nr. 49/2014, OUG nr. 96/2016, OMEN 3850/2017, OMENCS nr. 6129/20.12.2016, Metodologia UPB privind ocuparea posturilor didactice și de cercetare vacante;
2. Website Ministerul Educației (<http://jobs.edu.ro/>) și UPB (<http://www.pub.ro>, Universitate, Posturi Vacante, Didactice și de Cercetare), Monitorul Oficial al României (partea a III-a, nr. 152/24.04.2023);
3. Înscriere concurs: **24.04.2023 (luni) – 09.06.2023 (vineri)** – clădirea Rectorat, camera R207, zile lucrătoare;
4. Aprobarea Comisiilor de concurs: Consiliul Facultății **până în 12.05.2023 (vineri)** și în Senat până în **25.05.2023 (joi)**;
5. Desfășurare concurs (și Raport Comisie concurs) în perioada **26.06.2023 (luni)– 02.07.2023 (duminică)**:
 - *Tematicile din care Comisia de concurs alege tematica probelor susținute efectiv (Art. 3.5.e - HG 457/2011 și Art. II.1.5.e - Metodologia UPB) sunt constituite din disciplinele din Planul de învățământ din componența postului scos la concurs, afișate la Departamentul ce organizează concursul, cu toate informațiile necesare;*
 - *Comunicarea temei efective a probelor de concurs are loc la Avizierul Departamentului, cu cel puțin 5 zile lucrătoare înaintea desfășurării probelor (Art. II.6.5. Metodologia UPB);*
6. Decizia Comisiei de concurs privind ierarhia candidaților, nominalizarea candidatului care a întrunit cele mai bune rezultate și recomandarea privind ocuparea postului: afișare la sediul Departamentului unde a avut loc concursul **până în data de 02.07.2023 (duminică)**;
7. Contestații, exclusiv pentru nerespectarea procedurilor legale de concurs: **03.07.2023-05.07.2023**;
8. Avizul Consiliului Facultății asupra Raportului Comisiei de concurs: **până în data de 07.07.2023**
9. Aprobarea Senatului UPB asupra Raportului Comisiei de Concurs (Finalizare concurs/ Rezultat concurs): **până în 18.07.2023**
10. Comunicare rezultat final concurs (website UPB): 2 zile lucrătoare de la finalizarea concursului, respectiv de la aprobarea Senatului UPB asupra Raportului Comisiei de concurs;
11. Ocupare post: începând cu Sem. I, an universitar **2023 – 2024**.



Ministerul Educației
Universitatea POLITEHNICA din București

Formular de publicare a posturilor didactice și de cercetare în platforma *Euraxess*

Contact: euraxess@upb.ro



HR EXCELLENCE IN RESEARCH

Basic information*¹

Title*	Profesor universitar, poziția 6
Offer description*	<p>Departament description- Biotechnical systems</p> <p>Biotechnical systems are those technical systems that work with biological materials and process them in order to obtain food or to protect the environment, based on the imposition of technology as a tool to meet the world's food needs. They are also those agricultural systems in which plants grow without the presence of soil or the manipulation of living organisms by the application of science and engineering in order to believe useful products to humans.</p> <p>The Biotechnical Systems Department trains engineers through its programs of:</p> <ul style="list-style-type: none"> - <i>Undergraduate studies:</i> <ul style="list-style-type: none"> Applied Informatics in Environmental Engineering (IAIM) Mechatronics of Biotechnical Systems (MSB) Food Engineering (IPA) Machines and Installations for Agriculture and Food Industry (MIAIA) - <i>Masters:</i> <ul style="list-style-type: none"> Research, Design, Testing of Biotechnical Systems (CPTSB) Biotechnical Systems Engineering and Management (IMSB) Environmental Protection Engineering and Management (IMPM) Advanced Technologies in the Food Industry (TAIA) <p>The employment success rate of our graduates is very high, they are appreciated by important companies such as New Holland, CLASS, John Deere, IPSO or URBAN.</p> <p>Within the Department's Research Center, CCDSB, special emphasis is placed on scientific research conducted in modern laboratories.</p> <p>The collaboration with similar institutions on a national and international level aims at the joint organization of study programs, the development of research projects, mobility for teachers and students, as well as curriculum compatibility activities.</p> <p>The disciplines that are part of job structure are:</p> <ul style="list-style-type: none"> - Geomorphology of the environment - Meteorology and climatology - The engineering of the ecological storage of solid waste - Monitoring and control of environmental factors
Research field*	Environmental Engineering Engineering

Type of contract*	Permanent	Job status	Full-time
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¹ Câmpurile marcate cu * sunt obligatorii.

Is the job funded through a EU Research Framework Programme?*
Click pentru a selecta o opțiune.
No <input checked="" type="checkbox"/>

I. Hiring information and work location²

Faculty*	<i>Ingineria Sistemelor Biotehnice</i>		
Department*	Biotechnical system engineering		
No. of positions available			
Website	http://isb.pub.ro/	Contact person e-mail*	ghvoicu2005@yahoo.com
Phone		Mobile phone	0724715585

² Câmpurile marcate cu * sunt obligatorii.

II. Requirements

Required education level	Ph.D. or equivalent
Skills/Qualifications	<ul style="list-style-type: none">- motivational skills, interpersonal skills and communication skills for the development of undergraduate, master's and doctoral students- skills for efficient systematization and teaching of technical information within the job disciplines-creation of a research laboratory in which to work with the latest equipment and on the latest research topics- competences of scientific research in the laboratory on the subject of the disciplines subjects-skills for continuous improvement (improvement) of knowledge of the disciplines in the field of the job put up for competition in accordance with the evolution of science- competence in the oral presentation of works at national and international conferences in the field of environmental engineering;- competence in the use and interpretation of techniques for monitoring and controlling environmental factors;-competence in the development of waste recovery and treatment technologies;-competence in evaluating the impact on the environment;--competence in the efficient use of renewable energy sources;-competence in conducting state-of-the-art research in the field of environmental engineering that can be published in journals with F.I. > 1;- the ability to coordinate doctoral students on various current research topics in the field of environmental engineering;- the competence to participate in carrying out scientific research activities, on the basis of a contract/grant, or in other research works, in the field of the position put out to competition, as a member of the research team or as responsible for the project
Required languages	Romanian and english

III. Additional information

Additional comments	The ability to coordinate doctoral students on various current research topics in the field of environmental engineering.
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IV. ANEXA: Lista subdomeniilor de cercetare

Biology	<input type="checkbox"/>	Communication science	<input type="checkbox"/>
Biological sciences	<input type="checkbox"/>	Graphic communication	<input type="checkbox"/>
Biodiversity	<input type="checkbox"/>	Science communication	<input type="checkbox"/>
Biological engineering	<input type="checkbox"/>		
		Computer science	<input type="checkbox"/>
Agricultural sciences	<input type="checkbox"/>	3D Modelling	<input type="checkbox"/>
Soil science	<input type="checkbox"/>	Automatic computing	<input type="checkbox"/>
Agronomics	<input type="checkbox"/>	Computer architecture	<input type="checkbox"/>
Agricultural products	<input type="checkbox"/>	Computer hardware	<input type="checkbox"/>
		Computer systems	<input type="checkbox"/>
Arts	<input type="checkbox"/>	Cybernetics	<input type="checkbox"/>
Visual arts	<input type="checkbox"/>	Database management	<input type="checkbox"/>
		Digital systems	<input type="checkbox"/>
Astronomy	<input type="checkbox"/>	Informatics	<input type="checkbox"/>
Astrophysics	<input type="checkbox"/>	Modelling tools	<input type="checkbox"/>
Cosmology	<input type="checkbox"/>	Programming	<input type="checkbox"/>
		Systems design	<input type="checkbox"/>
Chemistry	<input type="checkbox"/>		
Analytical chemistry	<input type="checkbox"/>	Economics	<input type="checkbox"/>
Applied chemistry	<input type="checkbox"/>	Applied economics	<input type="checkbox"/>
Biological chemistry	<input type="checkbox"/>	Business economics	<input type="checkbox"/>
Catalysis chemistry	<input type="checkbox"/>	Commercial economics	<input type="checkbox"/>
Combinatorial chemistry	<input type="checkbox"/>	Consumer economics	<input type="checkbox"/>
Computational chemistry	<input type="checkbox"/>	Econometrics	<input type="checkbox"/>
Heterogeneous chemistry	<input type="checkbox"/>	Industrial economics	<input type="checkbox"/>
Homogeneous chemistry	<input type="checkbox"/>	Market economics	<input type="checkbox"/>
Inorganic chemistry	<input type="checkbox"/>	Marketing	<input type="checkbox"/>
Instrumental analyses	<input type="checkbox"/>	Management studies	<input type="checkbox"/>
Instrumental techniques	<input type="checkbox"/>	Production economics	<input type="checkbox"/>
Molecular chemistry	<input type="checkbox"/>	Transport economics	<input type="checkbox"/>
Physical chemistry	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>		
Reaction mechanisms and dynamics	<input type="checkbox"/>	Engineering	<input type="checkbox"/>
Solar chemistry	<input type="checkbox"/>	Airspace engineering	<input type="checkbox"/>
Structural chemistry	<input type="checkbox"/>	Agriculture engineering	<input type="checkbox"/>
		Biomaterial engineering	<input type="checkbox"/>
Education	<input type="checkbox"/>	Biomedical engineering	<input type="checkbox"/>
Learning studies	<input type="checkbox"/>	Chemical engineering	<input type="checkbox"/>
Research methodology	<input type="checkbox"/>	Civil engineering	<input type="checkbox"/>
Teaching methods	<input type="checkbox"/>	Communication engineering	<input type="checkbox"/>
		Computer engineering	<input type="checkbox"/>
Information science	<input type="checkbox"/>	Control engineering	<input type="checkbox"/>
Information management	<input type="checkbox"/>	Design engineering	<input type="checkbox"/>
		Electrical engineering	<input type="checkbox"/>
Management	<input type="checkbox"/>	Electronical engineering	<input type="checkbox"/>
		Industrial engineering	<input type="checkbox"/>
Mathematics	<input type="checkbox"/>	Knowledge engineering	<input type="checkbox"/>

Combinatorial analysis	<input type="checkbox"/>	Materials engineering	<input type="checkbox"/>
Computation mathematics	<input type="checkbox"/>	Mechanical engineering	<input type="checkbox"/>
Discrete mathematics	<input type="checkbox"/>	Microengineering	<input type="checkbox"/>
Chaos theory	<input type="checkbox"/>	Nuclear engineering	<input type="checkbox"/>
Applied mathematics	<input type="checkbox"/>	Precision engineering	<input type="checkbox"/>
Algebra	<input type="checkbox"/>	Process engineering	<input type="checkbox"/>
Algorithms	<input type="checkbox"/>	Projects engineering	<input type="checkbox"/>
Geometrics	<input type="checkbox"/>	Simulation engineering	<input type="checkbox"/>
Mathematical analysis	<input type="checkbox"/>	Sound engineering	<input type="checkbox"/>
Probability	<input type="checkbox"/>	Surveying engineering	<input type="checkbox"/>
Statistics	<input type="checkbox"/>	System engineering	<input type="checkbox"/>
Mathematical logic	<input type="checkbox"/>		
Number theory	<input type="checkbox"/>	Physics	<input type="checkbox"/>
		Quantum mechanics	<input type="checkbox"/>
Technology	<input type="checkbox"/>	Relativity	<input type="checkbox"/>
Chemical technology	<input type="checkbox"/>	Solid state physics	<input type="checkbox"/>
Energy technology	<input type="checkbox"/>	Neutron physics	<input type="checkbox"/>
Environmental technology	<input checked="" type="checkbox"/>	Electronic physics	<input type="checkbox"/>
Future technology	<input type="checkbox"/>	Mathematical physics	<input type="checkbox"/>
Electrical technology	<input type="checkbox"/>	Metrology	<input type="checkbox"/>
Dating techniques	<input type="checkbox"/>	Statics	<input type="checkbox"/>
Communication technology	<input type="checkbox"/>	Statistical physics	<input type="checkbox"/>
Computer technology	<input type="checkbox"/>	Surface physics	<input type="checkbox"/>
Construction technology	<input type="checkbox"/>	Thermodynamics	<input type="checkbox"/>
Graphic techniques	<input type="checkbox"/>	Electromagnetism	<input type="checkbox"/>
High vacuum technology	<input type="checkbox"/>	Optics	<input type="checkbox"/>
Space technology	<input type="checkbox"/>	Condensed matter properties	<input type="checkbox"/>
Standardisation of technologies	<input type="checkbox"/>	Acoustics	<input type="checkbox"/>
Telecommunications technology	<input type="checkbox"/>	Classical mechanics	<input type="checkbox"/>
Sound technology	<input type="checkbox"/>	Computational physics	<input type="checkbox"/>
Safety technology	<input type="checkbox"/>	Chemical physics	<input type="checkbox"/>
Production technology	<input type="checkbox"/>	Biophysics	<input type="checkbox"/>
Quantum technology	<input type="checkbox"/>	Applied physics	<input type="checkbox"/>
Remote sensing	<input type="checkbox"/>		
Transport technology	<input type="checkbox"/>	Medical sciences	<input type="checkbox"/>
Vacuum technology	<input type="checkbox"/>		
Water technology	<input type="checkbox"/>	Political sciences	<input type="checkbox"/>
Knowledge technology	<input type="checkbox"/>	Science and society	<input type="checkbox"/>
Laboratory technology	<input type="checkbox"/>	Policy studies	<input type="checkbox"/>
Marine technology	<input type="checkbox"/>	Public awareness of science	<input type="checkbox"/>
Internet technology	<input type="checkbox"/>	Public policy	<input type="checkbox"/>
Interface technology	<input type="checkbox"/>		
Industrial technology	<input type="checkbox"/>	Sociology	<input type="checkbox"/>
Information technology	<input type="checkbox"/>	Sociology of enterprise	<input type="checkbox"/>
Instrumentation technology	<input type="checkbox"/>	Social shaping of technology	<input type="checkbox"/>
Materials technology	<input type="checkbox"/>		
Measurement technology	<input type="checkbox"/>		
Nanotechnology	<input type="checkbox"/>		

Nuclear technology	<input type="checkbox"/>		
Optronics	<input type="checkbox"/>		
Mining	<input type="checkbox"/>		
Military technology	<input type="checkbox"/>		
Medical technology	<input type="checkbox"/>		
Micro-technology	<input type="checkbox"/>		



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Contact: euraxess@upb.ro



HR EXCELLENCE IN RESEARCH

Basic information

Title	Şef Lucrări, poziția 25
Offer description	<p>APPLICATION</p> <p>Before applying, all candidates are invited to read carefully the UPB's Methodology for occupying didactic and research positions: https://posturivacante.upb.ro/wp-content/uploads/2022/09/Methodology-for-occupyng-vacant-didactic-and-research-positions-2022.pdf</p> <p>The Department of Biotechnical Systems of the Faculty of Biotechnical Systems Engineering, Polytechnic University of Bucharest, announces a competition for a vacancy of Associate Professor in the field of Plant and Animal Resources Engineering.</p> <p>The courses that are part of the vacant position are: Technologies and Control in the Milk Industry; Agricultural Machinery III / Advanced Biotechnical Systems III; Modern Methods in Food Processing; Legislation and Consumer Protection; General Technologies in the Food Industry.</p> <p>Biotechnical systems are technical systems that work with biological materials and process them to obtain food or to protect the environment, based on the imposition of technology as a tool to meet the world's food needs. They are also those agricultural systems that allow plants to grow without the presence of soil, or systems for manipulating living organisms by applying science and engineering techniques, in order to provide useful products.</p> <p>Within the academic year 2022-2023, Biotechnical Systems Department has the following undergraduate programs: Applied Informatics in Environmental Engineering; Food Engineering; Machinery and Equipment for Agriculture and Food Industry; Mechatronics for Biotechnical Systems; for masters degree, the following programs are available: Research, Design, and Testing of Biotechnical Systems; Advanced Technologies in Food Industry; Engineering and Management of Biotechnical Systems; Engineering and Management in Environmental Protection; there are also available PhD studies in the fields of Mechanical Engineering and Environmental Engineering.</p> <p>In accordance with the mission and objectives of the University POLITEHNICA of Bucharest, the mission of the Faculty of Biotechnical Systems Engineering is to promote education and research to meet the demands of a society based on knowledge and continuing education, in the interest of society and respect for human dignity.</p> <p>The Faculty of Biotechnical Systems Engineering has undertaken a student-centered education mission, structured around the following objectives: training of specialists in the fields of environmental engineering, mechanical engineering, food engineering, mechatronics and robotics, with a solid professional training based on the thorough development of general engineering sciences and of related sciences, on the understanding of the spirit that incorporates as a whole the sciences that provide specialized training in the engineering area; continuous correlation of the theoretical training with the practical training, the formation of students' capacity to apply in practice the assimilated knowledge; combining the engineering training that is specific to each field of study, with the concern for achieving a healthy moral education, which is focused on promoting quality and efficiency in education and research, on making education and research compatible with European</p>

	<p>guidelines, on adapting the educational offer to the requirements of the market, on the continuous development of scientific research at the level of international standards, on the assertion of the scientific performance of members of the academic community, on the development of partnerships with business, national and international institutions and organizations, and on the modernization and development of teaching and research materials.</p> <p>The Faculty ensures the realization of an efficient education, developed and improved through scientific research activity, according to the requirements and demands, with appropriate means offered by the modern information society. Graduates of the Environmental Engineering study programmes will be able to use specific, technical and cultural-humanistic knowledge to contribute to the technological, economic and social-cultural progress of Romanian society and the contemporary world.</p>
Research field	Engineering

Is the job funded through a EU Research Framework Programme?*

Click pentru a selecta o opțiune.

No ☒

Where to apply

floarea.dragomir@upb.ro

I. Hiring information and work location

Faculty	Ingineria Sistemelor Biotehnice
Department	Biotechnical Systems
Department/Centre website	http://bios.pub.ro/
Contact person e-mail	ghvoicu_2005@yahoo.com
Contact person phone number	+40214029633

II. Requirements

Această secțiune este opțională. Recomandăm includerea unor informații pentru a completa anunțul de angajare.

Required education level	<p>Engineering</p> <p>Ph.D. or equivalent</p>
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Skills/Qualifications	<ul style="list-style-type: none"> - The candidate must have a Bachelor's and Master's degree in Mechanical Engineering and a PhD degree in Mechanical Engineering (with the topic of the PhD thesis close to or related to Plant and Animal Resources Engineering, according to the disciplines of the vacancy). - The candidate must have very good organization and communication skills, as well as availability for traveling to scientific events. - Publication in national and/or international publishing houses, as author or co-author, of specialized books with ISBN, whose subject matter is either in the field of the disciplines from the vacant position, or in similar fields, is an advantage. - The candidate must prove the activity of publishing the research results (author/co-author of books, book chapters, articles, and/or patents or patent applications) in the field of the vacant position or in related fields. These results also demonstrate the candidate's ability to coordinate students in scientific research activities, to complete the diploma/ dissertation assignments, or to participate in student communication sessions. - In addition to teaching and research activities, the candidate must be involved in all activities carried out in the department, including coordinating diploma and master's theses to complete university studies, tutoring, attracting candidates for undergraduate and master's studies, promotion of the faculty's study programs etc.
Specific requirements	<ul style="list-style-type: none"> - minimum 6 years of university teaching experience; - membership in at least 1 scientific research contract won through competition; - enrolled in a postdoctoral programme.
Required languages	Romanian (Native language)
Required research experience	Engineering 4-10

III. Additional information

Această secțiune este opțională.

Additional comments	<p>All academic staff at UPB enjoy several benefits, such as training and professional development opportunities, holiday leave, accommodation in UPB residences, banking facilities, access to research infrastructure, and software for remote working.</p> <ul style="list-style-type: none"> - Technologies and Control in the Dairy Industry - is a subject studied in the fourth year of the Food Engineering specialization. The subject covers concepts related to the properties of milk of animal origin, such as fat, protein, casein, vitamins and minerals. It also covers concepts related to technological processes for preserving milk or processes and technologies for obtaining drinking milk, milk powder, butter and fresh and ripened cheeses. The
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	<p>subject also covers concepts related to the specific analysis of the dairy industry.</p> <ul style="list-style-type: none"> - Agricultural Machinery III / Advanced Biotechnical Systems III - is a subject studied in the fourth year of the Food Industry Machinery and Plant Engineering specialization. The subject deals with concepts related to the processes and technologies used to process feedstuffs, but also with the construction of machinery used to process feedstuffs or to distribute water and feed to animals. - Modern Methods in Food Processing - is a subject studied in the Fourth Year of the Food Engineering specialisation. The subject deals with concepts related to food preservation technologies. - Legislation and Consumer Protection - is a subject studied in the fourth year of the Food Products Engineering specialisation and deals with notions related to combating unfair practices of traders in relation to consumers and harmonising regulations with European consumer protection legislation, as well as notions related to the approval of rules on the marketing of food products. - General Technologies in the Food Industry - is a subject studied in the third year of the specialisation Food Control and Expertise in the Faculty of Chemical Engineering and Biotechnology. This subject deals with concepts related to technologies in the food industry, such as: milling, bakery, meat, milk, sugar, winemaking, distillation.
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IV. ANEXA: Lista subdomeniilor de cercetare.

Recomandăm selectarea a cât mai multe subdomenii. Cel puțin unul este obligatoriu.

Biological sciences	<input type="checkbox"/>	Communication science	<input type="checkbox"/>
Biodiversity	<input type="checkbox"/>	Graphic communication	<input type="checkbox"/>
Biological engineering	<input type="checkbox"/>	Science communication	<input type="checkbox"/>
Biology	<input type="checkbox"/>		
		Computer science	<input type="checkbox"/>
Agricultural sciences	<input type="checkbox"/>	3D Modelling	<input type="checkbox"/>
Soil science	<input type="checkbox"/>	Automatic computing	<input type="checkbox"/>
Agronomics	<input type="checkbox"/>	Computer architecture	<input type="checkbox"/>
Agricultural products	<input type="checkbox"/>	Computer hardware	<input type="checkbox"/>
		Computer systems	<input type="checkbox"/>
Arts	<input type="checkbox"/>	Cybernetics	<input type="checkbox"/>
Visual arts	<input type="checkbox"/>	Database management	<input type="checkbox"/>
		Digital systems	<input type="checkbox"/>
Astronomy	<input type="checkbox"/>	Informatics	<input type="checkbox"/>
Astrophysics	<input type="checkbox"/>	Modelling tools	<input type="checkbox"/>
Cosmology	<input type="checkbox"/>	Programming	<input type="checkbox"/>
Other			
		Systems design	<input type="checkbox"/>
Chemistry	<input type="checkbox"/>		
Analytical chemistry	<input type="checkbox"/>	Economics	<input type="checkbox"/>

Applied chemistry	<input type="checkbox"/>	Applied economics	<input type="checkbox"/>
Biochemistry	<input type="checkbox"/>	Business economics	<input type="checkbox"/>
Combinatorial chemistry	<input type="checkbox"/>	Commercial economics	<input type="checkbox"/>
Computational chemistry	<input type="checkbox"/>	Consumer economics	<input type="checkbox"/>
Heterogeneous chemistry	<input type="checkbox"/>	Econometrics	<input type="checkbox"/>
Homogeneous chemistry	<input type="checkbox"/>	Industrial economics	<input type="checkbox"/>
Inorganic chemistry	<input type="checkbox"/>	Market economics	<input type="checkbox"/>
Instrumental analyses	<input type="checkbox"/>	Marketing	<input type="checkbox"/>
Instrumental techniques	<input type="checkbox"/>	Management studies	<input type="checkbox"/>
Molecular chemistry	<input type="checkbox"/>	Production economics	<input type="checkbox"/>
Organic chemistry	<input type="checkbox"/>	Transport economics	<input type="checkbox"/>
Physical chemistry	<input type="checkbox"/>		
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Reaction mechanisms and dynamics	<input type="checkbox"/>		
Solar chemistry	<input type="checkbox"/>	Engineering	<input checked="" type="checkbox"/>
Structural chemistry	<input type="checkbox"/>	Airspace engineering	<input type="checkbox"/>
		Agriculture engineering	<input checked="" type="checkbox"/>
		Biomaterial engineering	<input checked="" type="checkbox"/>
Education	<input type="checkbox"/>	Biomedical engineering	<input type="checkbox"/>
Learning studies	<input type="checkbox"/>	Chemical engineering	<input type="checkbox"/>
Research methodology	<input type="checkbox"/>	Civil engineering	<input type="checkbox"/>
Teaching methods	<input type="checkbox"/>	Communication engineering	<input type="checkbox"/>
		Computer engineering	<input type="checkbox"/>
Information science	<input type="checkbox"/>	Control engineering	<input type="checkbox"/>
Information management	<input type="checkbox"/>	Design engineering	<input type="checkbox"/>
		Electrical engineering	<input type="checkbox"/>
Management	<input type="checkbox"/>	Electronic engineering	<input type="checkbox"/>
		Industrial engineering	<input type="checkbox"/>
Mathematics	<input type="checkbox"/>	Knowledge engineering	<input type="checkbox"/>
Combinatorial analysis	<input type="checkbox"/>	Materials engineering	<input type="checkbox"/>
Computation mathematics	<input type="checkbox"/>	Mechanical engineering	<input checked="" type="checkbox"/>
Discrete mathematics	<input type="checkbox"/>	Microengineering	<input type="checkbox"/>
Chaos theory	<input type="checkbox"/>	Nuclear engineering	<input type="checkbox"/>
Applied mathematics	<input type="checkbox"/>	Precision engineering	<input type="checkbox"/>
Algebra	<input type="checkbox"/>	Process engineering	<input checked="" type="checkbox"/>
Algorithms	<input type="checkbox"/>	Projects engineering	<input type="checkbox"/>
Geometrics	<input type="checkbox"/>	Simulation engineering	<input type="checkbox"/>
Mathematical analysis	<input type="checkbox"/>	Sound engineering	<input type="checkbox"/>
Probability	<input type="checkbox"/>	Surveying engineering	<input type="checkbox"/>
Statistics	<input type="checkbox"/>	Systems engineering	<input type="checkbox"/>
Mathematical logic	<input type="checkbox"/>		
Number theory	<input type="checkbox"/>	Physics	<input type="checkbox"/>
		Quantum mechanics	<input type="checkbox"/>
Technology	<input type="checkbox"/>	Relativity	<input type="checkbox"/>
Chemical technology	<input type="checkbox"/>	Solid state physics	<input type="checkbox"/>
Energy technology	<input type="checkbox"/>	Neutron physics	<input type="checkbox"/>
Environmental technology	<input type="checkbox"/>	Electronic physics	<input type="checkbox"/>
Future technology	<input type="checkbox"/>	Mathematical physics	<input type="checkbox"/>

Electrical technology	<input type="checkbox"/>	Metrology	<input type="checkbox"/>
Dating techniques	<input type="checkbox"/>	Statics	<input type="checkbox"/>
Communication technology	<input type="checkbox"/>	Statistical physics	<input type="checkbox"/>
Computer technology	<input type="checkbox"/>	Surface physics	<input type="checkbox"/>
Construction technology	<input type="checkbox"/>	Thermodynamics	<input type="checkbox"/>
Graphic techniques	<input type="checkbox"/>	Electromagnetism	<input type="checkbox"/>
High vacuum technology	<input type="checkbox"/>	Optics	<input type="checkbox"/>
Space technology	<input type="checkbox"/>	Condensed matter properties	<input type="checkbox"/>
Standardization of technologies	<input type="checkbox"/>	Acoustics	<input type="checkbox"/>
Telecommunications technology	<input type="checkbox"/>	Classical mechanics	<input type="checkbox"/>
Sound technology	<input type="checkbox"/>	Computational physics	<input type="checkbox"/>
Safety technology	<input type="checkbox"/>	Chemical physics	<input type="checkbox"/>
Production technology	<input type="checkbox"/>	Biophysics	<input type="checkbox"/>
Quantum technology	<input type="checkbox"/>	Applied physics	<input type="checkbox"/>
Remote sensing	<input type="checkbox"/>		
Transport technology	<input type="checkbox"/>	Medical sciences	<input type="checkbox"/>
Vacuum technology	<input type="checkbox"/>		
Water technology	<input type="checkbox"/>	Political sciences	<input type="checkbox"/>
Knowledge technology	<input type="checkbox"/>	Science and society	<input type="checkbox"/>
Laboratory technology	<input type="checkbox"/>	Policy studies	<input type="checkbox"/>
Marine technology	<input type="checkbox"/>	Public awareness of science	<input type="checkbox"/>
Internet technology	<input type="checkbox"/>	Public policy	<input type="checkbox"/>
Interface technology	<input type="checkbox"/>		
Industrial technology	<input type="checkbox"/>	Sociology	<input type="checkbox"/>
Information technology	<input type="checkbox"/>	Sociology of enterprise	<input type="checkbox"/>
Instrumentation technology	<input type="checkbox"/>	Social shaping of technology	<input type="checkbox"/>
Materials technology	<input type="checkbox"/>		
Measurement technology	<input type="checkbox"/>		
Nanotechnology	<input type="checkbox"/>		
Nuclear technology	<input type="checkbox"/>		
Optronics	<input type="checkbox"/>		
Mining	<input type="checkbox"/>		
Military technology	<input type="checkbox"/>		
Medical technology	<input type="checkbox"/>		
Micro-technology	<input type="checkbox"/>		



Ministerul Educației
Universitatea POLITEHNICA din București

Formular de publicare a posturilor didactice și de cercetare în platforma *Euraxess*

Contact: euraxess@upb.ro



HR EXCELLENCE IN RESEARCH

I. Basic information

Title	Şef de lucrări, poziția 26
Offer description	<p>The Department of Biotechnical Systems within the Faculty of Biotechnical Systems Engineering, University POLITEHNICA of Bucharest, announces the competition for a vacant position of lecturer, in the field of Environmental Engineering.</p> <p>The courses that are part of the vacant position are: Ecology, Environmental factors investigation, Topography, Computer-assisted biotechnologies.</p> <p>Biotechnical systems are technical systems that work with biological materials and process them to obtain food or to protect the environment, based on the imposition of technology as a tool to meet the world's food needs. They are also those agricultural systems that allow plants to grow without the presence of soil, or systems for manipulating living organisms by applying science and engineering techniques, in order to provide useful products.</p> <p>Within the academic year 2022-2023, Biotechnical Systems Department has the following undergraduate programs: Applied Informatics in Environmental Engineering; Food Engineering; Machinery and Equipment for Agriculture and Food Industry; Mechatronics for Biotechnical Systems; for masters degree, the following programs are available: Research, Design, and Testing of Biotechnical Systems; Advanced Technologies in Food Industry; Engineering and Management of Biotechnical Systems; Engineering and Management in Environmental Protection; there are also available PhD studies in the fields of Mechanical Engineering and Environmental Engineering.</p> <p>In accordance with the mission and objectives of the University POLITEHNICA of Bucharest, the mission of the Faculty of Biotechnical Systems Engineering is to promote education and research to meet the demands of a society based on knowledge and continuing education, in the interest of society and respect for human dignity.</p> <p>The Faculty of Biotechnical Systems Engineering has undertaken a student-centered education mission, structured around the following objectives:</p> <ul style="list-style-type: none">• training of specialists in the fields of environmental engineering, mechanical engineering, food engineering, mechatronics and robotics, with a solid professional training based on the thorough development of general engineering sciences and of related sciences, on the understanding of the spirit that incorporates as a whole the sciences that provide specialized training in the engineering area;• continuous correlation of the theoretical training with the practical training, the formation of students' capacity to apply in practice the assimilated knowledge;• combining the engineering training that is specific to each field of study, with the concern for achieving a healthy moral education, which is focused on promoting quality and efficiency in education and research, on making education and research compatible with European guidelines, on adapting the educational offer to the requirements of the market, on the continuous development of scientific research at the level of international standards, on the assertion of the scientific performance of members of the academic community, on the development of partnerships with business, national and international institutions and organizations, and on the modernization and development of teaching and research materials.

	<p>Regarding the field of Environmental Engineering, according to the Chart of University POLITEHNICA of Bucharest, the Faculty of Biotechnical Systems Engineering, through the Department of Biotechnical Systems, also assumes the mission of training specialists through the following levels of studies:</p> <ul style="list-style-type: none"> ✓ Undergraduate studies - specialization in Applied Informatics in Environmental Engineering. Graduates of this specialization will be able to: understand the mechanisms, processes and effects of anthropogenic or natural origin that determine and influence environmental pollution; analyse the technical solutions needed to prevent, mitigate and eliminate negative environmental phenomena; develop digital technologies and software applications for the realization of products, machinery, equipment for depollution and environmental protection and intelligent tools, integrated into computer systems; use legal regulations and information technologies to prevent and mitigate the impact of natural and man-made phenomena on the environment; identify and use the methods and instrumental techniques needed to monitor environmental factors; coordinate the processes and activities carried out in organisations and companies in the field of environmental protection using intelligent information applications. ✓ Master studies - specializations in Engineering and Management in Environmental Protection and Engineering and Management of Biotechnical Systems. Graduates of these programs will have the following competences: Completion of fundamental knowledge specific to environmental engineering; Elaboration of studies and reports publishable or professionally applicable in the field of environmental engineering and protection; Implementation of scientific principles, specific rules and regulations in environmental engineering and environmental management systems. ✓ Doctoral studies within the Biotechnical Systems Doctoral School. The faculty ensures the accomplishment of high-performance doctoral internships, developed and perfected by means of scientific research, in accordance to established high level requirements and exigencies, as well as with appropriate means that are offered by the modern information society. <p>APPLICATION</p> <p>Before applying, all candidates are invited to read carefully the UPB's Methodology for occupying didactic and research positions: https://posturivacante.upb.ro/wp-content/uploads/2022/09/Methodology-for-occupyng-vacant-didactic-and-research-positions-2022.pdf</p>
Research field	Engineering

Is the job funded through a EU Research Framework Programme?*

Click pentru a selecta o opțiune.

No ☒

Where to apply
floarea.dragomir@upb.ro

II. Hiring information and work location

Faculty	Ingineria Sistemelor Blotehnice
Department	Biotechnical Systems
Department/Centre website	http://bios.pub.ro/
Contact person e-mail	ghvoicu2005@yahoo.com
Contact person phone number	0040214029633

III. Requirements

Această secțiune este opțională. Recomandăm includerea unor informații pentru a completa anunțul de angajare.

Required education level	<p>Engineering</p> <p>Ph.D. or equivalent</p>
Skills/Qualifications	<ul style="list-style-type: none"> - The candidate must have bachelor's and master's degree in the field of Environmental Engineering or in the field of Mechanical Engineering (in the case of five-year university studies, only an engineering degree in one of the above mentioned fields), as well as a doctoral degree in the field of Mechanical Engineering. The subject of the doctoral thesis must be either specific to the specializations of the faculty and with a topic close to or related to the specific of the disciplines within the vacant position. - The candidate must have very good organization and communication skills, as well as availability for traveling to scientific events. - Publication in national and/or international publishing houses, as author or co-author, of specialized books with ISBN, whose subject matter is either in the field of the disciplines from the vacant position, or in similar fields, is an advantage. - The candidate must prove the activity of publishing the research results (author/co-author of books, book chapters, articles, and/or patents or patent applications) in the field of the vacant position or in related fields. These results also demonstrate the candidate's ability to coordinate students in scientific research activities, to complete the diploma/dissertation assignments, or to participate in student communication sessions. - In addition to teaching and research activities, the candidate must be involved in all activities carried out in the department, including coordinating diploma and master's theses to complete university studies, tutoring, attracting candidates for undergraduate and master's studies, promotion of the faculty's study programs etc.

Specific requirements	<ul style="list-style-type: none"> - minimum 6 years of university teaching experience; - membership in at least 1 scientific research contract won through competition; - enrolled in a postdoctoral programme.
Required languages	Romanian (Native language)
Required research experience	Engineering 4-10

IV. Additional information

Această secțiune este opțională.

Additional comments	<p>- <i>Ecology</i> - is a subject studied in the third year of the Applied Informatics in Environmental Engineering specialization. It is a synthetic biological science that studies the interaction between organisms, plants and their environment (abiotic and biotic). It deals with concepts related to ecosystem functions, circulation of matter in ecosystems, elements of biodiversity conservation and environmental protection.</p> <p>- <i>Environmental factors investigation</i> – is a subject studied in the third year of the Applied Informatics in Environmental Engineering specialization. It covers concepts related to the impact of human activities on the environment, the general context of the emergence of the concept of sustainable development, monitoring of air, water and soil quality, etc..</p> <p>- <i>Topography</i> – is a subject studied in the fourth year of the Applied Informatics in Environmental Engineering specialization. It covers notions related to the object and branches of terrestrial measurements, topographic elements of the terrain in the vertical and horizontal plane, determination of topographic quantities, direct and indirect measurement of distances.</p> <p>- <i>Computer-assisted biotechnologies</i> - is a subject studied in the fourth year of the Applied Informatics in Environmental Engineering specialization. It covers concepts related to the importance of environmental biotechnologies for society, the main groups of microorganisms used in environmental biotechnologies, biotechnologies for composting organic waste, wastewater treatment, energy production, etc.</p> <p>All academic staff at UPB enjoy several benefits, such as training and professional development opportunities, holiday leave, accommodation in UPB residences, banking facilities, access to research infrastructure, and software for remote working.</p>
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V. ANEXA: Lista subdomeniilor de cercetare.

Recomandăm selectarea a cât mai multe subdomenii. Cel puțin unul este obligatoriu.

Biological sciences	<input type="checkbox"/>	Communication science	<input type="checkbox"/>
Biodiversity	<input type="checkbox"/>	Graphic communication	<input type="checkbox"/>
Biological engineering	<input type="checkbox"/>	Science communication	<input type="checkbox"/>
Biology	<input type="checkbox"/>		
		Computer science	<input type="checkbox"/>
Agricultural sciences	<input type="checkbox"/>	3D Modelling	<input type="checkbox"/>
Soil science	<input type="checkbox"/>	Automatic computing	<input type="checkbox"/>
Agronomics	<input type="checkbox"/>	Computer architecture	<input type="checkbox"/>
Agricultural products	<input type="checkbox"/>	Computer hardware	<input type="checkbox"/>
		Computer systems	<input type="checkbox"/>
Arts	<input type="checkbox"/>	Cybernetics	<input type="checkbox"/>
Visual arts	<input type="checkbox"/>	Database management	<input type="checkbox"/>
		Digital systems	<input type="checkbox"/>
Astronomy	<input type="checkbox"/>	Informatics	<input type="checkbox"/>
Astrophysics	<input type="checkbox"/>	Modelling tools	<input type="checkbox"/>
Cosmology	<input type="checkbox"/>	Programming	<input type="checkbox"/>
Other			
		Systems design	<input type="checkbox"/>
Chemistry	<input type="checkbox"/>		
Analytical chemistry	<input type="checkbox"/>	Economics	<input type="checkbox"/>
Applied chemistry	<input type="checkbox"/>	Applied economics	<input type="checkbox"/>
Biochemistry	<input type="checkbox"/>	Business economics	<input type="checkbox"/>
Combinatorial chemistry	<input type="checkbox"/>	Commercial economics	<input type="checkbox"/>
Computational chemistry	<input type="checkbox"/>	Consumer economics	<input type="checkbox"/>
Heterogeneous chemistry	<input type="checkbox"/>	Econometrics	<input type="checkbox"/>
Homogeneous chemistry	<input type="checkbox"/>	Industrial economics	<input type="checkbox"/>
Inorganic chemistry	<input type="checkbox"/>	Market economics	<input type="checkbox"/>
Instrumental analyses	<input type="checkbox"/>	Marketing	<input type="checkbox"/>
Instrumental techniques	<input type="checkbox"/>	Management studies	<input type="checkbox"/>
Molecular chemistry	<input type="checkbox"/>	Production economics	<input type="checkbox"/>
Organic chemistry	<input type="checkbox"/>	Transport economics	<input type="checkbox"/>
Physical chemistry	<input type="checkbox"/>		
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Reaction mechanisms and dynamics	<input type="checkbox"/>		
Solar chemistry	<input type="checkbox"/>	Engineering	<input checked="" type="checkbox"/>
Structural chemistry	<input type="checkbox"/>	Airspace engineering	<input type="checkbox"/>
		Agriculture engineering	<input checked="" type="checkbox"/>
		Biomaterial engineering	<input type="checkbox"/>
Education	<input type="checkbox"/>	Biomedical engineering	<input type="checkbox"/>
Learning studies	<input type="checkbox"/>	Chemical engineering	<input type="checkbox"/>
Research methodology	<input type="checkbox"/>	Civil engineering	<input type="checkbox"/>
Teaching methods	<input type="checkbox"/>	Communication engineering	<input type="checkbox"/>
		Computer engineering	<input type="checkbox"/>
Information science	<input type="checkbox"/>	Control engineering	<input type="checkbox"/>
Information management	<input type="checkbox"/>	Design engineering	<input type="checkbox"/>

		Electrical engineering	<input type="checkbox"/>
Management	<input type="checkbox"/>	Electronic engineering	<input type="checkbox"/>
		Industrial engineering	<input checked="" type="checkbox"/>
Mathematics	<input type="checkbox"/>	Knowledge engineering	<input type="checkbox"/>
Combinatorial analysis	<input type="checkbox"/>	Materials engineering	<input type="checkbox"/>
Computation mathematics	<input type="checkbox"/>	Mechanical engineering	<input checked="" type="checkbox"/>
Discrete mathematics	<input type="checkbox"/>	Microengineering	<input type="checkbox"/>
Chaos theory	<input type="checkbox"/>	Nuclear engineering	<input type="checkbox"/>
Applied mathematics	<input type="checkbox"/>	Precision engineering	<input type="checkbox"/>
Algebra	<input type="checkbox"/>	Process engineering	<input checked="" type="checkbox"/>
Algorithms	<input type="checkbox"/>	Projects engineering	<input type="checkbox"/>
Geometrics	<input type="checkbox"/>	Simulation engineering	<input type="checkbox"/>
Mathematical analysis	<input type="checkbox"/>	Sound engineering	<input type="checkbox"/>
Probability	<input type="checkbox"/>	Surveying engineering	<input type="checkbox"/>
Statistics	<input type="checkbox"/>	Systems engineering	<input type="checkbox"/>
Mathematical logic	<input type="checkbox"/>		
Number theory	<input type="checkbox"/>	Physics	<input type="checkbox"/>
		Quantum mechanics	<input type="checkbox"/>
Technology	<input type="checkbox"/>	Relativity	<input type="checkbox"/>
Chemical technology	<input type="checkbox"/>	Solid state physics	<input type="checkbox"/>
Energy technology	<input type="checkbox"/>	Neutron physics	<input type="checkbox"/>
Environmental technology	<input type="checkbox"/>	Electronic physics	<input type="checkbox"/>
Future technology	<input type="checkbox"/>	Mathematical physics	<input type="checkbox"/>
Electrical technology	<input type="checkbox"/>	Metrology	<input type="checkbox"/>
Dating techniques	<input type="checkbox"/>	Statics	<input type="checkbox"/>
Communication technology	<input type="checkbox"/>	Statistical physics	<input type="checkbox"/>
Computer technology	<input type="checkbox"/>	Surface physics	<input type="checkbox"/>
Construction technology	<input type="checkbox"/>	Thermodynamics	<input type="checkbox"/>
Graphic techniques	<input type="checkbox"/>	Electromagnetism	<input type="checkbox"/>
High vacuum technology	<input type="checkbox"/>	Optics	<input type="checkbox"/>
Space technology	<input type="checkbox"/>	Condensed matter properties	<input type="checkbox"/>
Standardization of technologies	<input type="checkbox"/>	Acoustics	<input type="checkbox"/>
Telecommunications technology	<input type="checkbox"/>	Classical mechanics	<input type="checkbox"/>
Sound technology	<input type="checkbox"/>	Computational physics	<input type="checkbox"/>
Safety technology	<input type="checkbox"/>	Chemical physics	<input type="checkbox"/>
Production technology	<input type="checkbox"/>	Biophysics	<input type="checkbox"/>
Quantum technology	<input type="checkbox"/>	Applied physics	<input type="checkbox"/>
Remote sensing	<input type="checkbox"/>		
Transport technology	<input type="checkbox"/>	Medical sciences	<input type="checkbox"/>
Vacuum technology	<input type="checkbox"/>		
Water technology	<input type="checkbox"/>	Political sciences	<input type="checkbox"/>
Knowledge technology	<input type="checkbox"/>	Science and society	<input type="checkbox"/>
Laboratory technology	<input type="checkbox"/>	Policy studies	<input type="checkbox"/>
Marine technology	<input type="checkbox"/>	Public awareness of science	<input type="checkbox"/>
Internet technology	<input type="checkbox"/>	Public policy	<input type="checkbox"/>
Interface technology	<input type="checkbox"/>		
Industrial technology	<input type="checkbox"/>	Sociology	<input type="checkbox"/>
Information technology	<input type="checkbox"/>	Sociology of enterprise	<input type="checkbox"/>

Instrumentation technology	<input type="checkbox"/>	Social shaping of technology	<input type="checkbox"/>
Materials technology	<input type="checkbox"/>		
Measurement technology	<input type="checkbox"/>		
Nanotechnology	<input type="checkbox"/>		
Nuclear technology	<input type="checkbox"/>		
Optronics	<input type="checkbox"/>		
Mining	<input type="checkbox"/>		
Military technology	<input type="checkbox"/>		
Medical technology	<input type="checkbox"/>		
Micro-technology	<input type="checkbox"/>		



Ministerul Educației
Universitatea POLITEHNICA din București

Formular de publicare a posturilor didactice și de cercetare în platforma *Euraxess*

Contact: euraxess@upb.ro



HR EXCELLENCE IN RESEARCH

Recomandări privind utilizarea portal

I. Basic information*¹

Title*	Asistent universitar , poziția 35
Offer description*	<p><i>Biotechnical systems (STDs) are complex systems that include biological and technical subsystems that work together to achieve a common goal.</i></p> <p><i>Biotechnical systems are those technical systems that work with biological materials and process them in order to obtain food or to protect the living environment, based on the necessity of some technologies as a tool to ensure the world's food needs. They are also those agricultural systems in which plants grow without the presence of soil or the manipulation of living organisms through the application of science and engineering in order to create products useful to humans.</i></p> <p><i>The Biotechnical Systems Department trains and trains engineers through its programs of:</i></p> <p><i>Undergraduate studies:</i></p> <ul style="list-style-type: none"> • <i>Machinery and Installations for Agriculture and Food Industry (MIAIA)</i> • <i>Applied Informatics in Environmental Engineering (IAIM)</i> • <i>Food Engineering (IPA)</i> • <i>Mechatronics of Biotechnical Systems (MSB)</i> <p><i>Masters:</i></p> <ul style="list-style-type: none"> • <i>Research, Design, Testing of Biotechnical Systems (CPTSB) - Mechanical Engineering</i> • <i>Engineering and Management in Environmental Protection (IMPM) - Environmental Engineering</i> • <i>Biotechnical Systems Engineering and Management (IMSB) - Environmental Engineering</i> • <i>Advanced Technologies in the Food Industry (TAIA) - Food Engineering</i> • <i>Engineering and Management in Processing and Storage of Agri-Food Products - IPA field</i> <p><i>Doctoral studies:</i></p> <ul style="list-style-type: none"> • <i>Mechanical Engineering</i> • <i>Environmental Engineering</i> <p><i>Food industry, environment protection and agriculture are fundamental to all national economies, guaranteeing the existence of independent nations. After they were in decline for a few years, the same as the entire economy in Romania, these industries are now booming. The strict international regulations regarding environmental protection must also be observed in our country. These are only a few reasons why the need for specialists in the above-mentioned domains is higher.</i></p> <p><i>The graduates who have obtained good results can continue their university studies by opting for a Master which enables their thorough approach of the Bachelor's domain or of a related domain, enhancing their scientific research capacities and having the necessary and compulsory basis for the doctoral studies.</i></p> <p><i>The graduates' employment opportunities are various. They can exploit their engineering knowledge in companies with the following lines of business: designing, manufacturing and maintaining machines and equipment for the food industry (meat industry, milk industry, extractive and fermentative industry, bread manufacturing,</i></p>

¹ Câmpurile marcate cu * sunt obligatorii.

vegetables and fruit processing, etc.), equipment for environment protection and biotechnologies, for exploiting and maintaining technical systems in agriculture, as well as management activities in the above mentioned domains.

Mechatronics is the synergistic combination of mechanical engineering, electronic engineering, computer science, automatic control engineering and systems design engineering in order to create, design and manufacture useful products. Mechatronics has as main object of study mechanical engineering, electronics and hardware and software systems engineering. Mechatronics of Biotechnical Systems is a new undergraduate program proposed by the Department of Biotechnical Systems. Within the department and the faculty, research topics dedicated to the mechatronics of biotechnical systems are developed, topics developed together with specialists in the field of machines and installations for agriculture and food industry.

The structure of the position "Assistant, position 35" includes the following disciplines: Numerical Methods, Advanced Systems for Dosing and Packaging Products, Computer Aided Design, Artificial Intelligence, Physical Properties of Agri-food Materials, Advanced Technical Management in Biotechnical Systems, Modelling and Simulation of Biomechatronic Systems, Automatic Installations in the Food Industry, Automatic Process Control Systems in the Food Industry, Aided design in Environmental Engineering II, Packaging and Design in the Food Industry, Machines and Installations for Fruit and Vegetable Processing, Applied Informatics, Transport and Storage Systems for Agri-Food Products.

Field of the position "Assistant, position 35" in the State of functions of the Biotechnical Systems department is Mechanical Engineering.

- *Numerical methods (MN): Numerical methods are presented in detail, by discussing strictly mathematical aspects and describing algorithms using a pseudocode language.*

The first part of the course has a heterogeneous character - at the beginning the sources of errors and their propagation are presented, then algorithms and calculation complexity, and finally, programming methods. The second part deals with the numerical solution of equations and systems of nonlinear algebraic equations. Methods for locating the solution, successive approximations and accelerating convergence for nonlinear equations, as well as numerical methods for solving nonlinear algebraic systems are presented.

- *Advanced Systems for Dosing and Packaging Products(SADAP): This subject is studied within the field of Mechatronics, specializing in Mechatronics of Biotechnical Systems and aims to familiarize students with: basic principles in the packaging industry, respectively with advanced systems for dosing and packaging of food products, solid, liquid or paste, the principles used in the technological flow of packaging, their basic parameters, process control by PLCs and SCADA systems, some theoretical concepts used in solving practical applications and problems, with relevance to stimulate the learning process in students.*

- *Computer Aided Design (PAC): This discipline lists the design and analysis steps in SolidWorks, defines domain-specific concepts, describes or classifies concepts, processes, phenomena, structures. It also identifies design methods and highlights various consequences and relations.*

- *Artificial Intelligence (IA):* The subject is studied within the field of Mechatronics and Robotics / specialization Mechatronics of Biotechnical Systems and aims to contribute to the development of students' ability to define and apply the fundamental concepts of artificial intelligence, to analyze and evaluate current systems operating on the principles of artificial intelligence.
- *Physical Properties of Agri-food Materials (PFMA):* This subject is studied within the Mechanical Engineering degree and aims to familiarize students with the main approaches, models and explanatory theories of the field of physical properties of agri-food products, used in solving practical applications and problems, with relevance to stimulate learning in students.
- *Advanced Technical Management in Biotechnical Systems (MTASB):* This subject is studied within the field of Mechatronics and Robotics / MSB specialization in order to understand the fundamental, defining principles and concepts specific to advanced technical management of biotechnical systems and aims to familiarize students with the main approaches, models and explanatory theories of the field, used in solving practical applications and problems, with relevance to stimulate the learning process in students.
- *Automatic Installations in the Food Industry(IAIA):* The subject deals with basic and advanced notions related to automatic plants in the food industry, specific concepts and principles, all of which contribute to the transmission/formation to students of an overview of the methodological and procedural milestones related to the field.
- *Automatic Process Control Systems in the Food Industry(SACPIA):* This subject is studied within the field of Food Engineering / Food Engineering specialization and aims to familiarize students with the main approaches, models and explanatory theories of automatic process control systems in the food industry, used in solving practical applications and problems, with relevance to stimulate the learning process in students.
- *Aided Design in Environmental Engineering II (PAIM II):* This discipline lists the design and analysis steps in SolidWorks, defines domain-specific concepts, describes or classifies concepts, processes, phenomena, structures. It also identifies design methods and highlights various consequences and relations.
- *Packaging and Design in the Food Industry (ADIA):* This subject is studied in the field of Food Engineering, specializing in Food Engineering and aims to familiarize students with: basic principles in the packaging industry, classification, aesthetics and design of packaging, respectively systems for dosing and packaging of food products, solid, liquid or paste.
- *Machines and Installations for Fruit and Vegetable Processing(MIPLF):* This subject is a specialist subject studied as part of the specialisation Machinery and Plant for Agriculture and the Food Industry and aims to familiarise students with the main approaches, models and explanatory theories of the field, utilized for cutting, slicing and drying of fruits and vegetables
- *Applied Informatics (IA):* This discipline presents the design and analysis steps in SolidWorks, defines domain-specific concepts, describes or classifies concepts, processes, phenomena, structures. It also identifies design methods and highlights various types of approach for solving problems.
- *Transport and Storage Systems for Agri-Food Products(STDPA):* The discipline deals with basic/advanced notions, concepts and

	<i>specific principles, all of which contribute to the transmission/formation of an overview of the methodological and procedural landmarks related to the field.</i> <i>•Modelling and Simulation of Biomechatronic Systems: The discipline deals with basic and advanced notions of biomechatronic systems, concepts and specific principles, all of which contribute to the transmission/formation of an overview of the methodological and procedural landmarks related to the field. The main approach is on modelling and simulation of the systems.</i>
Research field*	Engineering

Type of contract*	Permanent	Job status	Full-time
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Is the job funded through a EU Research Framework Programme?*
Click pentru a selecta o opțiune.
No <input checked="" type="checkbox"/>

II. Hiring information and work location²

Faculty*	<i>Ingineria Sistemelor Biotehnice</i>		
Department*	<i>Biotechnical Systems</i>		
No. of positions available	35		
Website	http://bios.pub.ro/	Contact person e-mail*	Gheorghe VOICU
Phone	0214029132	Mobile phone	0724715585

III. Requirements

Această secțiune este opțională. Recomandăm includerea unor informații pentru a completa anunțul de angajare.

Required education level	Master Degree or equivalent
Skills/Qualifications	<i>The assistant professor conducts seminars, laboratories or practical works with students. It has the mission to assist course holders in all teaching, knowledge application and assessment activities. It also has in its object of activity the execution of a quality scientific research and the bringing of its results in the scientific community, through publications or communications. The assistant is the one who carries out most of the student teaching activities (applications).</i> <i>Attributions and responsibilities:</i> <ul style="list-style-type: none"> <i>permanent collaboration with the course holder;</i> <i>seminar activities, year projects, practical and laboratory works;</i> <i>project guidance, bachelor's and graduation papers, productive practice and scientific research;</i> <i>execution of scientific research;</i>

² Câmpurile marcate cu * sunt obligatorii.

	<ul style="list-style-type: none"> • monitoring the activity of bibliographic information and applied training of students; • leading teaching activities; • performance evaluation activities by grades or ratings; • consultations, guidance of student scientific circles. <p>The disciplines from the competition position are: Numerical Methods, Advanced Systems for Dosing and Packaging Products, Computer Aided Design, Artificial Intelligence, Physical Properties of Agri-food Materials, Advanced Technical Management in Biotechnical Systems, Modelling and Simulation of Biomechatronic Systems, Automatic Installations in the Food Industry, Automatic Process Control Systems in the Food Industry, Aided design in Environmental Engineering II, Packaging and Design in the Food Industry, Machines and Installations for Fruit and Vegetable Processing, Applied Informatics, Transport and Storage Systems for Agri-Food Products².</p>
Required languages	English

IV. Additional information

Această secțiune este opțională.

Additional comments	<i>Orice alte informații, în limita a 3000 de caractere</i>
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V. ANEXA: Lista subdomeniilor de cercetare

Biology	<input type="checkbox"/>	Communication science	<input type="checkbox"/>
Biological sciences	<input type="checkbox"/>	Graphic communication	<input type="checkbox"/>
Biodiversity	<input type="checkbox"/>	Science communication	<input type="checkbox"/>
Biological engineering	<input type="checkbox"/>		
		Computer science	<input type="checkbox"/>
Agricultural sciences	<input type="checkbox"/>	3D Modelling	<input type="checkbox"/>
Soil science	<input type="checkbox"/>	Automatic computing	<input type="checkbox"/>
Agronomics	<input type="checkbox"/>	Computer architecture	<input type="checkbox"/>
Agricultural products	<input type="checkbox"/>	Computer hardware	<input type="checkbox"/>
		Computer systems	<input type="checkbox"/>
Arts	<input type="checkbox"/>	Cybernetics	<input type="checkbox"/>
Visual arts	<input type="checkbox"/>	Database management	<input type="checkbox"/>
		Digital systems	<input type="checkbox"/>
Astronomy	<input type="checkbox"/>	Informatics	<input type="checkbox"/>
Astrophysics	<input type="checkbox"/>	Modelling tools	<input type="checkbox"/>
Cosmology	<input type="checkbox"/>	Programming	<input type="checkbox"/>
		Systems design	<input type="checkbox"/>
Chemistry	<input type="checkbox"/>		
Analytical chemistry	<input type="checkbox"/>	Economics	<input type="checkbox"/>
Applied chemistry	<input type="checkbox"/>	Applied economics	<input type="checkbox"/>
Biological chemistry	<input type="checkbox"/>	Business economics	<input type="checkbox"/>

Catalysis chemistry	<input type="checkbox"/>	Commercial economics	<input type="checkbox"/>
Combinatorial chemistry	<input type="checkbox"/>	Consumer economics	<input type="checkbox"/>
Computational chemistry	<input type="checkbox"/>	Econometrics	<input type="checkbox"/>
Heterogeneous chemistry	<input type="checkbox"/>	Industrial economics	<input type="checkbox"/>
Homogeneous chemistry	<input type="checkbox"/>	Market economics	<input type="checkbox"/>
Inorganic chemistry	<input type="checkbox"/>	Marketing	<input type="checkbox"/>
Instrumental analyses	<input type="checkbox"/>	Management studies	<input type="checkbox"/>
Instrumental techniques	<input type="checkbox"/>	Production economics	<input type="checkbox"/>
Molecular chemistry	<input type="checkbox"/>	Transport economics	<input type="checkbox"/>
Physical chemistry	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>		
Reaction mechanisms and dynamics	<input type="checkbox"/>	Engineering	<input type="checkbox"/>
Solar chemistry	<input type="checkbox"/>	Airspace engineering	<input type="checkbox"/>
Structural chemistry	<input type="checkbox"/>	Agriculture engineering	<input type="checkbox"/>
		Biomaterial engineering	<input type="checkbox"/>
Education	<input type="checkbox"/>	Biomedical engineering	<input type="checkbox"/>
Learning studies	<input type="checkbox"/>	Chemical engineering	<input type="checkbox"/>
Research methodology	<input type="checkbox"/>	Civil engineering	<input type="checkbox"/>
Teaching methods	<input type="checkbox"/>	Communication engineering	<input type="checkbox"/>
		Computer engineering	<input type="checkbox"/>
Information science	<input type="checkbox"/>	Control engineering	<input type="checkbox"/>
Information management	<input type="checkbox"/>	Design engineering	<input type="checkbox"/>
		Electrical engineering	<input type="checkbox"/>
Management	<input type="checkbox"/>	Electronical engineering	<input type="checkbox"/>
		Industrial engineering	<input type="checkbox"/>
Mathematics	<input type="checkbox"/>	Knowledge engineering	<input type="checkbox"/>
Combinatorial analysis	<input type="checkbox"/>	Materials engineering	<input type="checkbox"/>
Computation mathematics	<input type="checkbox"/>	Mechanical engineering	<input checked="" type="checkbox"/>
Discrete mathematics	<input type="checkbox"/>	Microengineering	<input type="checkbox"/>
Chaos theory	<input type="checkbox"/>	Nuclear engineering	<input type="checkbox"/>
Applied mathematics	<input type="checkbox"/>	Precision engineering	<input type="checkbox"/>
Algebra	<input type="checkbox"/>	Process engineering	<input type="checkbox"/>
Algorithms	<input type="checkbox"/>	Projects engineering	<input type="checkbox"/>
Geometrics	<input type="checkbox"/>	Simulation engineering	<input type="checkbox"/>
Mathematical analysis	<input type="checkbox"/>	Sound engineering	<input type="checkbox"/>
Probability	<input type="checkbox"/>	Surveying engineering	<input type="checkbox"/>
Statistics	<input type="checkbox"/>	System engineering	<input type="checkbox"/>
Mathematical logic	<input type="checkbox"/>		
Number theory	<input type="checkbox"/>	Physics	<input type="checkbox"/>
		Quantum mechanics	<input type="checkbox"/>
Technology	<input type="checkbox"/>	Relativity	<input type="checkbox"/>
Chemical technology	<input type="checkbox"/>	Solid state physics	<input type="checkbox"/>
Energy technology	<input type="checkbox"/>	Neutron physics	<input type="checkbox"/>
Environmental technology	<input type="checkbox"/>	Electronic physics	<input type="checkbox"/>
Future technology	<input type="checkbox"/>	Mathematical physics	<input type="checkbox"/>
Electrical technology	<input type="checkbox"/>	Metrology	<input type="checkbox"/>
Dating techniques	<input type="checkbox"/>	Statics	<input type="checkbox"/>
Communication technology	<input type="checkbox"/>	Statistical physics	<input type="checkbox"/>

Computer technology	<input type="checkbox"/>	Surface physics	<input type="checkbox"/>
Construction technology	<input type="checkbox"/>	Thermodynamics	<input type="checkbox"/>
Graphic techniques	<input type="checkbox"/>	Electromagnetism	<input type="checkbox"/>
High vacuum technology	<input type="checkbox"/>	Optics	<input type="checkbox"/>
Space technology	<input type="checkbox"/>	Condensed matter properties	<input type="checkbox"/>
Standardisation of technologies	<input type="checkbox"/>	Acoustics	<input type="checkbox"/>
Telecommunications technology	<input type="checkbox"/>	Classical mechanics	<input type="checkbox"/>
Sound technology	<input type="checkbox"/>	Computational physics	<input type="checkbox"/>
Safety technology	<input type="checkbox"/>	Chemical physics	<input type="checkbox"/>
Production technology	<input type="checkbox"/>	Biophysics	<input type="checkbox"/>
Quantum technology	<input type="checkbox"/>	Applied physics	<input type="checkbox"/>
Remote sensing	<input type="checkbox"/>		
Transport technology	<input type="checkbox"/>	Medical sciences	<input type="checkbox"/>
Vacuum technology	<input type="checkbox"/>		
Water technology	<input type="checkbox"/>	Political sciences	<input type="checkbox"/>
Knowledge technology	<input type="checkbox"/>	Science and society	<input type="checkbox"/>
Laboratory technology	<input type="checkbox"/>	Policy studies	<input type="checkbox"/>
Marine technology	<input type="checkbox"/>	Public awareness of science	<input type="checkbox"/>
Internet technology	<input type="checkbox"/>	Public policy	<input type="checkbox"/>
Interface technology	<input type="checkbox"/>		
Industrial technology	<input type="checkbox"/>	Sociology	<input type="checkbox"/>
Information technology	<input type="checkbox"/>	Sociology of enterprise	<input type="checkbox"/>
Instrumentation technology	<input type="checkbox"/>	Social shaping of technology	<input type="checkbox"/>
Materials technology	<input type="checkbox"/>		
Measurement technology	<input type="checkbox"/>		
Nanotechnology	<input type="checkbox"/>		
Nuclear technology	<input type="checkbox"/>		
Optronics	<input type="checkbox"/>		
Mining	<input type="checkbox"/>		
Military technology	<input type="checkbox"/>		
Medical technology	<input type="checkbox"/>		
Micro-technology	<input type="checkbox"/>		