



MINISTERUL EDUCAȚIEI

UNIVERSITATEA MARITIMĂ DIN CONSTANȚA

900663, CONSTANȚA, str. Mircea cel Bătrân, nr. 104, ROMÂNIA

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Information about the academic career promotion examination for the position of
„Associate Professor”
Department of Fundamental Sciences and Humanities,
Position no. 6 in the job title list
Faculty of Navigation and Naval Transport
Constanta Maritime University

a.) Description of the role

This position of Associate Professor can be found under position 6 in the job title list of the Department of Fundamental Sciences and Humanities, the Faculty of Navigation and Naval Transport, Constanta Maritime University

The disciplines

- *Computer Programming and Programming Languages I;*
- *Computer Programming and Programming Languages II;*
- *Business Intelligence;*
- *Evolutionary Computation in Information Technology*

fall under Panel **P4 - Social Sciences**, **Subject Area: Economics and Business Administration**,
Affiliated Field: Economic Informatics.

b) Tasks / Activities associated with the position of Associate Professor

Teaching Load:

No.	Type of Activity	Number of conventional hours
1.	Teaching Activities	9 hrs. /week
2.	Supervision of Seminar, Labs, and Projects	3 hrs. / week
3.	Guidance for the elaboration of bachelor's theses	2 hrs. / week
4.	Guidance for the elaboration of master's theses	2 hrs. / week
5.	Guidance for the elaboration of doctoral theses	—
6.	Other practical teaching and research activities included in the curricula	2 hrs. / week
7.	Conducting educational, artistic or sporting activities	—
8.	Assessment Activities	2 hrs. / week



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9.	Tutoring, counseling, guidance of student scientific groups, of students within the European Credit Transfer System	2 hrs. / week
10.	Participation in education-oriented boards and commissions	2 hrs. / week
11.	Self-Study	6 hrs. / week

Research Load

No.	Type of Activity	Number of conventional hours
1.	Research Activities	10 hrs./week

c.) Minimum wage for classification

Position	Level of education	Years of academic seniority	Teaching staff remuneration scale – 01.06.2023					
			Basic remuneration - lei					
			Level					
			0	1	2	3	4	5
Associate Professor	Postgraduate	>25 years	8,846	9,510	9,986	10,486	10,749	11,018
	Postgraduate	20-25 years	7,880	8,471	8,895	9,340	9,574	9,814
	Postgraduate	15-20 years	6,817	7,329	7,696	8,081	8,284	8,492
	Postgraduate	10-15 years	6,401	6,882	7,227	7,589	7,779	7,974
	Postgraduate	5-10 years	6,128	6,588	6,918	7,264	7,446	7,633
	Postgraduate	3-5 years	5,808	6,244	6,557	6,885	7,058	7,235

d.) Calendar of the academic career promotion examination

- The application period will last 45 days after the DGIU has issued their notification.
- The academic career promotion examination can be held no earlier than 15 calendar days after the closing date of the application period.
- The time and place of the mandatory examination in the form of a public lecture will be announced on the examination page of the university website at least 5 working days before the examination takes place.



**CALENDAR OF THE ACADEMIC CAREER PROMOTION EXAMINATION FOR
OCCUPYING TEACHING VACANCIES IN THE 1ST SEMESTER, ACADEMIC YEAR
2023/2024**

The academic career promotion examination will be organized and carried out according to the Memorandum no. 428/DGIU/27.11.2023 on the issuance of the notification for the organization and conduct of the academic career promotion examination, in the academic year 2023-2024, semester I.

Submission of candidate files and verification thereof	28 November 2023-11 January 2024
Contest and posting of results	29 January-5 February 2024
Submission of appeals	5-7 February 2022
Solution of appeal	7 February 2022
Faculty Board Session for approval of contest reports	8 February 2022
Senate Session for validation of the contest	9 February 2022

e.) Procedures for the academic career promotion examination

In order to enter the competition for a teaching and research position, the candidate prepares a file containing at least the following documents:

- the application form for the competition, signed by the candidate, which includes an affidavit concerning the truthfulness of the information given in the application file;
- a proposal for the development of the candidate's academic career both in terms of teaching, in the case of teaching posts, and in terms of scientific research activities; the proposal must be drawn up by the candidate, must not exceed 10 pages and is one of the main criteria for deciding between candidates.
- the candidate's curriculum vitae in printed and electronic format;
- list of the candidate's work in printed and electronic format;
- the verification form of the fulfilment of the university's standards for the competition, completed and signed by the candidate
- documents relating to the doctoral degree: certified copy of the doctoral degree and, if the original doctoral degree is not recognized in Romania, the certificate of recognition or equivalence thereof;
- a summary, in Romanian and in an international language, of the doctoral thesis, on a maximum of one page for each language;
- an affidavit by the candidate indicating the situations of incompatibility provided for by Law no. 1/2011 in which he/she would find him/herself in case of winning the competition or the absence of such situations of incompatibility;
- criminal record or affidavit of no criminal record
- medical certificate. The appointment and tenure of a teaching post is subject to the presentation of a medical certificate, issued on a specific form drawn up by the Ministry of Education in conjunction with the Ministry of Health. Incompatibilities of a medical nature with



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the teaching position are established by protocol concluded between the Ministry of Education and the Ministry of Health;

- k) copies of other diplomas certifying the candidate's studies;
- l) copy of identity card or, if the candidate does not have an identity card, passport or other identity document issued in an equivalent identity purpose;
- m) if the candidate has changed their name, copies of documents certifying the name change - marriage certificate or proof of name change;
- n) maximum 10 publications, patents and other papers of the candidate, in electronic format, selected by them and considered to be most relevant for their professional achievements.
- o) at least three letters of recommendation on the candidate's professional qualities, written by personalities in the fields of the job's disciplines, from education and research institutions in the country or abroad, including their contact address.

Once submitted by the candidate, the file cannot be subject to additions, modifications or corrections.

The curriculum vitae of the candidate must include:

- a) information about the studies and diplomas obtained;
- b) information on professional experience and relevant jobs;
- c) information about research and development projects which he led as project manager and grants obtained, if there are such projects or grants, indicating for each funding source, funding amount and the main resulting publications and patents;
- d) information about the awards or other recognition of scientific contributions of the candidate.

The full list of papers of the candidate will be structured as follows:

- a) List of more than 10 papers of the candidate to be most relevant for his professional achievements, which are included in the electronical file and can be found in other types of works under this article;
- b) The doctoral thesis or theses;
- c) Patents and other industrial property titles;
- d) Books and chapters in books;
- e) Articles/studies extensively published in international scientific journals in the main stream;
- f) In extenso publication, the main works published in international specialized conferences;
- g) other works and scientific contributions, as appropriate, in the field of artistic creation.

The candidate's professional competences are assessed by the examination board on the basis of the examination file and, additionally, by one or more additional exams, including lectures, courses or the like, according to specific methodology. For all open-ended posts, at least one of the exams must consist of a public lecture of at least 45 minutes in which the candidate presents his/her most significant previous professional achievements and academic career development plan. This examination must also include a question session with the panel and the public. The time and place of the mandatory examination in the form of a public lecture will be announced on the examination page of the university website at least 5 working days before the examination takes place.



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Stages of the contest:

Stage I - Assessment of the candidate's file (evaluation of the documents submitted in the file in terms of compliance with legal standards)

Stage II - Public lecture on the candidate's teaching activity to date and a proposal for the development of the candidate's academic career both in terms of teaching and scientific research activities; Professional competences.

f.) The candidate file must contain at least the following documents:

- a) the application form for the competition, signed by the candidate, which includes an affidavit concerning the truthfulness of the information given in the application file;
- b) a proposal for the development of the candidate's academic career both in terms of teaching, in the case of teaching posts, and in terms of scientific research activities; the proposal must be drawn up by the candidate, must not exceed 10 pages and is one of the main criteria for deciding between candidates.
- c) the candidate's curriculum vitae in printed and electronic format;
- d) list of the candidate's work in printed and electronic format;
- e) The verification form of the fulfilment of the university's standards for the competition, completed and signed by the candidate
- f) Documents relating to the doctoral degree: certified copy of the doctoral degree and, if the original doctoral degree is not recognized in Romania, the certificate of recognition or equivalence thereof.
- g) a summary, in Romanian and in an international language, of the doctoral thesis, on a maximum of one page for each language;
- h) The candidate's affidavit indicating incompatibility situations stipulated by Law no. 1/2011 as they are for winning the competition or lack of such situations of incompatibility;
- i) criminal record or affidavit of no criminal record
- j) medical certificate. The appointment and tenure of a teaching post is subject to the presentation of a medical certificate, issued on a specific form drawn up by the Ministry of Education in conjunction with the Ministry of Health. Incompatibilities of a medical nature with the teaching position are established by protocol concluded between the Ministry of Education and the Ministry of Health;
- k) copies of other diplomas certifying the candidate's studies;
- l) copy of identity card or, if the candidate does not have an identity card, passport or other identity document issued in an equivalent identity purpose;
- m) if the candidate has changed their name, copies of documents certifying the name change - marriage certificate or proof of name change;
- n) maximum 10 publications, patents and other papers of the candidate, in electronic format, selected by them and considered to be most relevant for their professional achievements.
- o) at least three letters of recommendation on the candidate's professional qualities, written by personalities in the fields of the job's disciplines, from education and research institutions in the country or abroad, including their contact address.



g.) Examination Topics

Computer Programming and Programming Languages I

No.	Contents
1.	- Representation of numerical information; binary representation formats. - Alphanumeric coding, procedural/non-procedural codes; data compression methods. Multimedia information coding; data transmission conventions by type (logical, numeric, text, audio, video).
2.	- Operators and expressions in C; operator priority and expression evaluation. - C language instructions.
3.	- Fundamental algorithmic structures (linear, alternative and repetitive). - Auxiliary control structures: multiple selection (among several possible alternatives), loop with final test (checked after execution of operations in the cycle), for loop (with known number of steps).
4.	Procedural programming, functions and returning from them.

Bibliography

1. Dinu, S., *Computer Programming and Programming Languages* - Course in digital format on the e-campus platform <https://campus.cmu-edu.eu/mod/folder/view.php?id=54912>
2. Dinu, S. Pomazan, C., *Computer Programming*, Nautica Publishing House, 2013.
3. Dinu, S. Vulcu, V., *Computer Programming - A collection of problems*, Nautica Publishing House, 2019.
4. Damian, C., Ilinca, M., *Computer programming for engineers. C language*, Tehnopress Publishing House, 2016.
5. Sisiroi, A.R., *C++ Problems Solved*, Else Publishing House, 2021.

Computer Programming and Programming Languages II

No.	Contents
1.	Arrays in C++: one-dimensional arrays (vectors)/two-dimensional arrays (arrays).
2.	Pointers: Declaration, specific operations. Relation between pointers and arrays.
3.	String operations in C++.
4.	- User-defined non-homogeneous data structures and types. - The struct, typedef and enum types.



5.	- Dynamically allocated data structures (definitions, usefulness) List, stack, queue. Elementary operations. Dynamic memory allocation (specific operations and mechanisms). - Examples of applications using dynamic memory allocation. - Data structures: linear linked lists (single linked lists, double linked lists, circular lists)
6.	- Complexity analysis of algorithms. Notions of computational complexity. - Complexity classes. Examples of calculating the complexity of an algorithm.

Bibliography

1. Dinu, S., *Computer Programming and Programming Languages* - Course in digital format on the e-campus platform <https://campus.cmu-edu.eu/mod/folder/view.php?id=54913>
2. Dinu, S. Pomazan, C., *Computer Programming*, Nautica Publishing House, 2013.
3. Dinu, S. Vulcu, V., *Computer Programming - A collection of problems*, Nautica Publishing House, 2019.
4. Damian, C., Ilinca, M., *Computer programming for engineers. C language*, Tehnopress Publishing House, 2016.
5. Sisiroi, A.R., *C++ Problems Solved*, Else Publishing House, 2021.

Business Intelligence

No.	Contents
1.	Basic principles and elements of Business Intelligence
2.	Business process modeling for Business Intelligence
3.	Business Intelligence architectures and tools
4.	Use of data warehousing
5.	Microsoft Power BI for Business Intelligence: tools for the development of modern and integrative Business Intelligence solutions
6.	Types of analysis in the current business scenario – the connection between Business Intelligence, BigData and Data Analytics

Bibliography

1. Loshin, D., *Business Intelligence – The Savvy Manager’s Guide*, Editura Elsevier, 2013.
2. Szymczyk, K., El Emary, I.M.M., *Advanced Trends in ICT for Innovative Business Management*, Ed. CRC Press, 2023.
3. Kimball, R., Ross, M., *The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling, 3rd Edition*, Ed. Wiley, 2013.
4. Aspin, A., *Pro Power BI Desktop Self-Service Analytics and Data Visualization for the Power User-Third Edition*, Ed. Apress, 2020.
5. Olszak, C.M., *Business Intelligence and Big Data: Drivers of Organizational Success*, Ed. CRC Press, 2021.



6. Minelli, M., Chambers, M. and Dhira, A., *Big Data, Big Analytics - emerging Business Intelligence and Analytic trends for today's Businesses*, Ed. John Wiley & Sons, 2013.

Evolutionary Computation in Information Technology

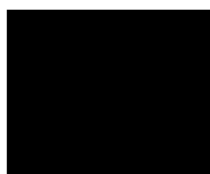
No.	Contents
1.	Intelligent Computing (IC) - a new paradigm in IT: basic principles, directions of study, examples and possibilities of using IC techniques in cybersecurity projects and applications
2.	Algorithms and applications of soft computing versus conventional computing - hard computing for solving complex problems
3.	Evolutionary Optimization Techniques - research areas and applications in cyber security
4.	Genetic Algorithms: basic concepts, structure and implementation features; advanced operators and new perspectives of use
5.	Models of Evolutionary Algorithms for multi-criteria optimization
6.	Hybrid meta-heuristics - new optimization approaches in complex spaces

Bibliography

1. Dinu, S., Raicu, G., Zăgan, R., *Modern methods of multi-criteria analysis in cyber security management*, Nautica Publishing House, Constanta, 2023..
2. Vanneschi, L., Silva, S., *Lectures on Intelligent Systems*, Editura Springer, 2023.
3. Kulkarni, A.J., Siarry, P., *Handbook of AI-based Metaheuristics*, Editura CRC Press, 2022.
4. Hassanien, A.E., Kim, T.H., Kacprzyk, J., Awad, A.I., *Bio-inspiring Cyber Security and Cloud Services: Trends and Innovations*, Springer-Verlag Berlin Heidelberg, 2014.
5. Talbi, E-G., *Metaheuristics - From Design to Implementation*, Ed. John Wiley & Sons, 2009.
6. Roeva, O., *Real-World Applications of Genetic Algorithms*, Editura InTech, 2012.

h.) The application for the contest will be submitted to the address specified in the header.

Dean,
Professor Costel STANCA, EngD



Head of Department,
Associate Professor Anca S

