MINISTRY OF EDUCATION
CONSTANTA MARITIME UNIVERSITY
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Information about the job application contest for the position of
„ Associate Professor"
Department of Navigation,
entry no. 23 in the job title list
Faculty of Navigation and Naval Transport
Constanta Maritime University

a.) Description of position

Full-time entry 23 in the Department of Navigation, Faculty of Navigation and Naval Transport, Constanta Maritime University

Academic Subjects in the curricula:

- Electronic Navigation
- Orthodromic Navigation
- Offshore Ships and Equipments

b) Tasks / Activities associated with the role

Teaching Load: Related duties /activities

Nr.	Type of Activity	Nr.of conventional hours
1.	Teaching Activities	4 h /week
2.	Supervision of Seminar, Labs, and Projects	4 h /week
3.	Guidance for the elaboration of the Bachelor thesis	4 h /week
4.	Guidance for the elaboration of the Master thesis	2 h /week
5.	Guidance for the elaboration of PhD thesis	____
6.	Research and Scholarly Activities enlisted in the Curricula	2 h /week
7.	Management of educational-artistic or sports activities	____
8.	Assessment Activities	2 h /week
9.	Tutoring, counseling, guidance of students' scientific groups, of students within the European	2 h/week

	Credit Transfer and Accumulation System	
10.	Participation in councils and commissions in the interest of education, including admission and completion of studies committees	2 h/week
11.	Self-Study	8 h /week

Research Load

Nr.	Type of Activity	Nr. ore convention ale
1.	Research Activities	10 h /week

c.) Minimum wage for classification

No.	Position	Study level	Years of academic labor	Wage Grid for teaching didactic personnel – May, 2021					
				Base wage - lei					
				Gradation					
				0	1	2	3	4	5
		S	>25 years	6,561	7,053	7,406	7,776	7,971	8,170
		S	20-25 years	5,956	6,403	6,723	7,059	7,236	7,415
		S	15-20 years	5,338	5,738	6,025	6,325	6,483	6,631
		S	10-15 years	4,973	5,346	5,614	5,895	6,029	6,166
		S	5-10 years	4,620	4,966	5,215	5,476	5,599	5,726
		S	3-5 years	4,485	4,821	5,035	5,261	5,379	5,499

d.) Calendar of the job application contest

- The Application period will run 45 days after the Announcement publication date in the Official Monitor (May 6th 2021 to June 19th 2021)
- The contest takes place in no more than 45 days after the application period. (from July 06th 2021 to July 16th 2021).
- The Higher Education Institution announces on its website the contest date, time and place at least **5 working days** before the test
- The period for appeals is: July 20th – 23rd July.

e). Detailed syllabus and tutorial

Electronic Navigation

Nr.	Content
1	Navigation hyperbolic systems. Hyperbola, determine the ship's position using hyperbolas. Principles of use of hyperboles in ship position determination. Use of two or more hyperboles for ship positioning.
2	Hyperboles associated with two foci, dividing the baseline into an equal number of divisions. Principles of position determination using hyperbolas.
3	Causes of errors and reduced accuracy in the baseline area. Determination of position using two position hyperbolas.
4	LORAN - C navigation system. Description of the LORAN - C navigation system. Block diagram of the LORAN - C receiver and how to measure the time difference. Resolving the ambiguities in determining the position line.
5	The effect of atmospheric waves on the measurement of time difference. Types of antennas and coverage areas used in the system. Selecting workstations. System failure warnings.
6	Satellite navigation system. Principles of operation of satellite navigation systems on board the ship. System configuration. Used frequencies. Code / A & P.
7	Obtaining the baseline size. Decreasing position accuracy. Types of diminutions used. GPS errors. Accuracy of the position point. Differential GPS.
8	The accuracy of the position obtained with GPS and its reduction. WGS 84. Impossibility of plotting the position obtained from the GPS receiver directly on the navigation map. Changing the datum.
9	Electronic navigation charts. Electronic Navigation Chart (ENC).
10	Standards to be met by electronic navigation maps. Software and hardware solutions used.
11	How to present information on electronic charts. Accessing and interpreting voyage information.
12	Automatic Identification System. Presenting the system.
13	Using the system in navigation.
14	Data provided by AIS

References

No.	Title
1	Alexander, S., Navigation Guide, Glasgow, Brown, Son & Ferguson, 1991
2	Appleyard, S. F., Marine Electronic Navigation, Routledge & Kegan Paul, London, 1988
3	Assembly Resolution A. 577 (14), Operational Status of Electronic Position-Fixing Systems
4	Assembly Ressolution A. 666 (16), World-Wide Radio Navigation System
5	Balaban, Gh., Tratat de navigatie maritimã, Editura Sport-Turism, Bucuresti, 1981
6	Bole, A., Dineley, W., The navigation control manual, London, Butterworth-Heinemann Ltd. ,1992
7	Bowdich, N., The American practical navigation, Defense Mapping Agency, USA ,1995
8	Maloney, M., Dutton's Navigation and Piloting, Naval Institute Press, USA, 1985
9	Tetley, L., Calcutt, D, Electronic Aids to Navigation, Edward Arnold, London, 1986
10	Toft, H., GPS Satellite Navigation. Stoevring, SHIPMATE, Rauff and Soerenson Ltd., Denmark, 1987

Orthodromic Navigation

Nr.	Content
1	Sailings. Difference in coordinates and departure. Types of sailings. Loxodrome.
2	Great circle and its elements. Distance on the great circle track and on the rhumb line. Great circle – definition and elements. Formulas for great circle calculus. Calculus of distance on the great circle and on the rhumb line.
3	Calculus of initial and final course on the great circle. Calculus of initial course. Calculus of final course.
4	Vertex and its coordinates computation. Vertex and its importance. Calculus of vertex latitude. Calculus of vertex longitude.
5	Way points on a great circle track. Computation of the course on a way point of a great circle track Calculus of intermediary waypoints coordinates. Calculus of intersection point with the Equator coordinates. Calculus of the course in the point of intersection of great circle with the Equator. Calculus of loxodromic course in an intermediary waypoint.
6	Composite method. General considerations regarding sailing on composite track. Calculus of composite sailing elements. Optimizing the composite sailing.
7	Drawing the great circle and the composite track on Mercator chart and on gnomonic chart. Generalities regarding gnomonic charts. Using the gnomonic chart. Graphical method of determining the elements of the composite track by using the Mercator chart.

References

No.	Title
1	Alexander, S., *Navigation Guide*, Glasgow, Brown, Son & Ferguson, 1991
2	Bârsan, E., *Navigaţie Maritimă Modernă*, Editura ExPonto, 2005
3	Frost, A., *Practical Navigation for Second Mates*, 6th ed. 1985, Glasgow, Brown, Son & Ferguson
4	Frost, A., *The Principles and Practice of Navigation*, 3rd ed. Glasgow, Brown, Son & Ferguson, 1988
5	Gh. Balaban - *Tratat de navigaţie maririma* – Sport Publishing House – Turism, Bucharest 1981
6	T.Atanasiu, A. Varsami – *Table nautice pentru uz didactic* – Nautica Publishing House, Constanta 2010
7	N. Bowdich - *The American practical navigation* - Defence Mapping Agency USA 1995

Offshore Ships and Equipments

Nr.	Content
1	Construction particularities of the following offshore vessels: • Platform supply vessel (PSV) / Offshore Support vessel (OSV) • Mobile Offshore Drilling Units / Ships (MODUs)
2	Construction particularities of the following offshore vessels: • Floating Production, Storage and Offloading Ships (FPSO) • Diving Support Vessel (DSV)
3	Construction particularities of the following offshore vessels: • Anchor Handling Tug Supply Vessel • Drill Ships • Dredgers
4	Construction particularities of the following offshore vessels: • Cable Lay and Repair Vessels • Pipe Laying Ships • Crane Barge and Crane Vessel
5	• Construction particularities of the following offshore vessels: • Rock Dumping Vessels • Specialist – Semi submersible Heavy Lift vessels • Shuttle Tanker
6	Recommendations regarding intact stability according to IS Code 2008 for Offshore supply vessels • Application • Principles governing near-coastal voyages • Construction precautions against capsizing • Operational procedures against capsizing • Stability criteria
7	Recommendations regarding intact stability according to IS Code 2008 for special purpose ships • Application • Stability criteria
8	Recommendations regarding intact stability according to IS Code 2008 for Mobile offshore drilling units • Application • Stability criteria
9	Provisions of the Code for Construction and Equipment of Mobile Offshore Drilling Units (MODUs Code) • Construction, strength and materials • Subdivision, Stability and freeboard
10	Provisions of the Code for Construction and Equipment of Mobile Offshore Drilling Units (MODUs Code) • Machinery and electrical installations
11	Requirements concerning Mobile Offshore Drilling Units according to International Association of Classification Societies • General design parameters • Watertight integrity
12	Requirements concerning Mobile Offshore Drilling Units according to International Association of Classification Societies • Intact and damage stability • Machinery and equipments
13	Floating Production, Storage and Offloading Ships (FPSO Ships) • The Hull - The concept and construction - Hull layout and SOLAS Regulations
14	Floating Production, Storage and Offloading Ships (FPSO Ships) • Machinery and equipment - Safety and electrical installations

	- Emergency support systems (EES) - Process and marine machinery

References

No.	Title
1	IMO Intact Ship Stability Code 2008
2	Code For The Construction And Equipment of Mobile Offshore Drilling Units (MODUs Code)
3	IACS Requirements concerning mobile offshore drilling units
4	Angus M., FPSO Handbook, Whiterbys Seamanship International, 2009
5	American Bureau of Shipping - *Guidance note on management of change for the marine and offshore industries*, 2013
6	Axelsson, T. - *Submarine cable laying and installation services for the offshore alternative energy industry*, Energy Ocean, 2008
7	Bard, J., Thaleman, F. - *Offshore infrastructure: Ports and Vessels*, A report of the offshore renewable energy conversion platform – Coordination Action (ORECCA), 2013
8	Det Norske Veritas - *Tugs, supply vessels and other offshore/harbor vessels*, 2005
9	Det Norske Veritas - *Dynamic positioning systems – Operation guidance*, 2011
10	IMO - *Resolution MSC 266(84), Code of safety for special purpose ships*, 2008
11	Rose, R.S.K. - *Future characteristics of offshore support vessels*, Massachusetts Institute of Technology Library, 2011

f.) Job Application Contest Procedures

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

a) Application form, signed by the candidate, including an affidavit about the veracity of the information presented in the file;

b Proposal to develop the candidate's academic career in terms of teaching, in case of teaching positions and also in terms of scientific research; the proposal shall be made by the candidate, it includes more than 10 pages and is one of the main criteria of selecting candidates.

c) Curriculum vitae of the candidate, printed and electronically

d) List of candidate's works, printed and electronically;

e) A sheet verifying the fulfillment of university standards of presentation in the competition, whose standard format is required by its own methodology. The verified sheet is completed and signed by the candidate;

f) Documents which relate to the degree of doctor: copy of the diploma of doctor and, if the original doctor's degree is not recognized in Romania, certificate of recognition or equivalence thereof;

g) Summary of the thesis in Romanian and a foreign language, or, where applicable, habilitation thesis on no more than 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) Copies of other diplomas demonstrating the candidate's studies

j) 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;

k) If the candidate has changed his name, copies of documents certifying the name change - marriage certificate or proof of name change;

l) Maximum 10 publications, patents and other papers of the candidate, in electronic format, selected by him and considered to be most relevant for their professional achievements.

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.

Full list of papers of the candidate will be 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. For the post of professor, works list will specify which of the papers presented are carried out after obtaining the certificate of entitlement;
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.
Candidate's professional competence is assessed by the competition commission based on the record of the competition and, additionally, by one or more samples of the competition, including lectures, courses or other similar support under this methodology:

a) for all posts for indefinite period, a test is represented by a public lecture at least 45 minutes in which the candidate has the most significant previous professional and academic career development plan.
b) The Higher Education Institution announces on its website the contest date, time and place at least 5 working days before the test.

Stages of the contest:

Stage I - the assessment of the candidate's application file (evaluation of the documents in accordance with Methodology for occupying vacant didactic and research positions.

Stage II - In the public lecture, the candidate has to deliver in at least 45 minutes, before the competition commission and the department members, his/her most significant professional results as well as plans for the development of his /her academic/scientific career.

Stage III - Taking a practical test to verify the knowledge of the use of the Simulator for navigation and ship maneuvering, TRANSAS NT Pro 4000 system.

1. Carrying out a simulation exercise at the choice of the commission, from the existing predefined ones;

2. Carrying out an evaluation on the simulator for the chosen exercise.

Stage IV - Taking an oral test with topics chosen from the theme of the contest.

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

a) Application form, signed by the candidate, including an affidavit about the veracity of the information presented in the file;

b Proposal to develop the candidate's academic career in terms of teaching, in case of teaching positions and also in terms of scientific research; the proposal shall be made by the candidate, it includes more than 10 pages and is one of the main criteria of selecting candidates.

c) Curriculum vitae of the candidate, printed and electronically

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j) 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;

k) If the candidate has changed his name, copies of documents certifying the name change - marriage certificate or proof of name change;

l) Maximum 10 publications, patents and other papers of the candidate, in electronic format, selected by him and considered to be most relevant for their professional achievements.

h.) The application for the competition will be submitted to the address enclosed in the header.

DEAN:
Prof. Costel STANCA, PhD

[redacted]

HEAD [redacted]ARTAMENT:
Prof. Constantin [redacted]ARSENIE, PhD