Field of Study: Maritime and navigation engineering
Programme of studies: Navigation and maritime and fluvial transport

First year of study:

Subject of study: Mathematical Analysis

CODE: D24NTMFL101
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 1st year/1st semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students basic theoretical and practical concepts related to the differential and integral study of functions of several variables and their applications. It allows the necessary practical skills and techniques associated to the differential and integral calculus.
CONTENT: Sequences and series of real numbers. Power series. Taylor series. Functions of several variables (limits and continuity, differentiation, partial derivatives). Extrema for functions of several variables. Multiple integrals (double and triple). Elements of vector calculus.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

Grecu L., Analiză matematică pentru ingineri, Ed. Universitaria Craiova, 2008
Pătrăşcoiu C. Grecu L., Bordeaşu I., Matematici aplicate în tehnică, Ed. Politehnica, Timişoara 2003
Grecu L., Probleme rezolvate de analiză matematică, Editura TipoRadical, Dr. Tr. Severin, 2006
F. Creţ, Rujescu C., Capitole speciale de analiză matematică și geometrie analitică, Ed. Mirton, Timişoara, 1999.
Cristescu R., Matematici generale, Ed. Didactică şi Pedagogică, Bucureşti 1967
Nicolescu M. Dinculeanu N. Marcus S., Analiză matematică, Ed. Didactică şi Pedagogică, 1966
Rădescu N., etc. Matematici speciale aplicate în economie –culegere de probleme, Reprografia Universităţii din Craiova, 1991.
Mihnea G., Matematici aplicate, Ed. Universității Bucuresti, 2000.

Subject of study: Chemistry

CODE: D24NTMFL102
NUMBER OF CREDITS: **3**
YEAR/SEMESTER: 1nd year/1nd semester
TYPE OF COURSE: fundamental
OBJECTIVES: The development knowledge in the field of chemistry, close by practice and the relationship with the environment, contributes to technical formation of the students but also achieve a clear image of the phenomena taking place in the technological processes
CONTENT: Correlation between chemical structure and some properties of substances. Thermodinamic and chemical kinetics notions. Electrochemistry and electrochemical energy conversion. Corrosion and corrosion protection. Fuels and lubricants. Macromolecular compounds.
TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective):

Ghermec, O., Chimie aplicată în inginerie, Editura Universitaria, Craiova, 2010,
Oancea, D., Podina, C., Oancea, A.M., Chimie. Principii şi Aplicaţii, Editura ALL,Bucureşti, 1998.
Ghermec, O., Chimie aplicată în inginerie, Tipografia Universităţii din Craiova, 2006

Subject of study: Physics

CODE: D24NTMFL103
NUMBER OF CREDITS: 4
YEAR/SEMESTER: First year / first semester
TYPE OF COURSE: fundamental
OBJECTIVES: Discipline "Physics" aims to familiarize students with the main physical phenomena from mechanical elements, covering chapters such as where atomic and nuclear physics. This knowledge, provided students are required to understand and manufacturing processes as well as operational activities and equipment repair. Moreover, the knowledge gained may allow improvement of technological processes.
CONTENT: The kinematics material point, Newtonian mechanical principles, theorems and conservation laws in the dynamics of material point, Oscillations. Sizes characteristic oscillations. Propagation of oscillations. Where .. Wave interference. Diffraction of waves. Dispersion. Doppler effect, temperature. Temperature measurement. Amount of heat, heat capacity, specific heat, Principle I of thermodynamics. Second principle of thermodynamics. Entropy, thermal machines ideal. Electrostatic interaction of electric charges. Electric field. Coulomb force. Flow tubing. Gauss's theorem. . Working electric field. Electric potential of point load. Electrical potential gradient. Equipotential surfaces. General characterization of the magnetic field. Magnetic field flow. Movement of loads in electric and magnetic field. Lorentz force. Features ferro-magnetic substances, dia-and paramagnetic, electromagnetic waves, quantum physics elements, getting physical solid, crystalline structure. Classification. Modern applications of physics
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral
BIBLIOGRAPHY (selective):

George, C., Moisil , Fizica pentru ingineri, Editura Tehnică, 1980
Traian Creţu. Fizică generală, vol.1, vol.2, Editura Tehnică, 1984-1986
Demian Gabriela, s.a. Fizica. Indrumator de laborator, Editura Universitaria Craiova 2006
D. Halliday, R. Resnick: Fizica, vol. I si II. Editura Did. si Pedag, Bucuresti (1975).
R R.P. Feynmann, R. B. Leighton, M. Sands: Fizica modernă, Vol. I-III. Edit.Tehn. Bucuresti (1970).

Subject of study: Programming computers and programming languages I

CODE: D24NTMFL104
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 1st year/ 1st semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students the basic computer terminology and concepts, a knowledge of the fundamental operating system functions, the theoretical and practical concepts of the Microsoft Office software applications as well as the Internet access and electronic communication.
CONTENT: Fundamentals of Computer. Operating Computer using GUI based Operating System. Microsoft Office application: MS Word, Excel, Access, PowerPoint. Internet access and electronic communication.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Brookshear J.G., Introducere în Informatica, Editura Teora, Bucuresti, 1998.
Coman D., Bazele utilizării calculatoarelor, Note de curs, 2010.
Coman D., Baze de date - ACCESS, Îndrumar de laborator, Reprografia Universităţii din Craiova, 2004.
Nortin Peter, John Goodman, PC - Totul despre calculatoare personale, Editura Teora, 2001
Petrescu A., Iacob Fr., Racovița Z., Inițiere în structura calculatoarelor electronice, Editura Teora,Bucuresti, 1996.
Prodan, F. Gorunescu, M. Gorunescu, Excel, Access si pagini Web, Ed. Albastră – Microinformatica, Cluj-Napoca, 2006.

Subject of study: Programming computers and programming languages II

CODE: D24NTMFL210
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 1st year/ 2nd semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students the basic concepts of programming languages, the description of algorithms, flowchart and pseudocode, basic concepts of C/C++ language and programming, a knowledge of data structures, functions and structured programming.
CONTENT: Basic concepts of programming languages. Algorithms. Description of alghoritms through flowchart and pseudocode. C++ language structures. Variables. Constants. Operators. Basic Input/Output. Data Structures. Functions and Arguments. Arrays. Pointers. Implementation of user-defined functions.

TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Coman D., Bazele utilizării calculatoarelor, Note de curs, 2010.
Donald K., Arta programarii calculatoarelor, vol I "Algoritmi fundamentali", Editura Teora,Bucuresti, 1999.
Kernighan B., Ritchie D., The C Programming Language, Prentice Hall, 1988.
Jamsa K., Klander L., Manualul fundamental de programare în C și C++, Editura Teora, 1997
Patrut B., "Aplicatii in C si C++", Editura TEORA, 2003.
Pârv B., Vancea Al., Fundamentele limbajelor de programare, Editura Albastra, Cluj-Napoca, 1996.
Somnea D., Turturea D., Initiere in C++, Ed. Tehnica, Bucuresti 1993.
Tudor Sorin, Bazele programarii in C++, Ed. L&S, Bucuresti, 1995.

Subject of study: Linear Algebra, Analytical and Differential Geometry

CODE:
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 1st year/ 1st semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students basic theoretical and practical concepts of linear algebra, analytical and differential geometry and their applications. It allows the necessary practical skills used in the study and understanding of other disciplines, and in engineering problem solving.
CONTENT: Vector spaces. Vector coordinates. Linear transformations. Eigenvectors and eigenvalues. Bilinear and quadratic forms. Euclidean spaces. Orthonormal basis. Conics and quadrics. Straight lines and planes in the Euclidean space. Differential geometry of curves and surfaces.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Vladimirescu I., Grecu L., Algebra liniara, geometrie analitica si diferentiala, EUC, 2007.
Vladimirescu I., Popescu M., Algebră liniară şi geometrie analitică, EUC, 1994
Vraciu G., Algebră liniară, Reprografia Univ. Craiova, 1994
C. Pătrăşcoiu, Algebră liniară, geometrie analitică și diferențială, EUC, 2005
Udrişte C., Algebră, geometrie analitică şi diferenţială, EDP, Bucureşti, 1984

Subject of study: Descriptive geometry and technical drawing

CODE: D24NTMFL105 + D24NTMFL211
NUMBER OF CREDITS: 3 + 3
YEAR/SEMESTER: 1st year/1st and 2nd semester
TYPE OF COURSE: fundamental
OBJECTIVES: Knowledge of basic concepts and reasonings on the implementation of solid geometry relationships in vertical projection systems. Knowledge representation methods in two-dimensional space of elementary geometric elements such as point, line, plane or surface. Knowledge and use of the methods for determining the actual size of the specified geometric elements. Understanding how to make detail drawings and drawings.
CONTENT: Representation of point and line in the triple vertical projection Representation plan. Methods of transformation of the figures. Assembly drawing. Assembly. Representation and dimensioning of machinery parts. Tolerances and fits. Applying the skills of working with drawing tools at the level of descriptive geometry

TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective):
Ghermec, C, Geometrie descriptivă şi desen tehnic, Note de curs
Popescu, T., ş.a., Geometrie descriptivă , Tipografia Universităţii din Craiova, 2005

Subject of study: Linear Algebra, Analytical and Differential Geometry

CODE: D24NTMFL212
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 1st year/2nd semester
TYPE OF COURSE: fundamental

OBJECTIVES: The course offers the students basic theoretical and practical concepts of linear algebra, analytical and differential geometry and their applications. It allows the necessary practical skills used in the study and understanding of other disciplines, and in engineering problem solving.
CONTENT: Vector spaces. Vector coordinates. Linear transformations. Eigenvectors and eigenvalues. Bilinear and quadratic forms. Euclidean spaces. Orthonormal basis. Conics and quadrics. Straight lines and planes in the Euclidean space. Differential geometry of curves and surfaces.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Vladimirescu I., Grecu L., Algebra liniara, geometrie analitica si diferentiala, EUC, 2007.
Vladimirescu I., Popescu M., Algebră liniară şi geometrie analitică, EUC, 1994
Vraciu G., Algebră liniară, Reprografia Univ. Craiova, 1994
C. Pătrăşcoiu, Algebră liniară, geometrie analitică si diferentială, EUC, 2005
Udrişte C., Algebră, geometrie analitică şi diferenţială, EDP, Bucureşti, 1984

Subject of study: Materials science

CODE: D24NTMFL213
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 1st year/2nd semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students theoretical and practical concepts on the chemical bonds, materials structures and properties related to the solidification, plastic deformation and heat treatment processes.
CONTENT: Chemical bonds. Ideal and real crystallin lattices. Plastic deformation mechanisms. Crystalization and solidification phenomena. Accompaning processes of the solidification phenomena. Alloy systems theory. Fe-C alloys. Fe-based solidification structures. Non-ferrous alloys. Basis on heat treatments of ferrous and non-ferrous alloys. Heat treatment structures of ferrous and non-ferrous alloys. Basis on composites and nanomaterials.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Gingu, O., Sima, G., Stefan, I., Studiul materialelor – note de curs, Reprografia Universitatii din Craiova, 2011
Gingu, O., Materiale compozite usoare, Ed. Universitaria, Craiova, 2003
Mangra, M., Materiale fabricate prin metalurgia pulberilor, Editura Universitaria Craiova, 1997, ISBN -973-9271-17-0
Mangra, M., Stiinta Materialelor. Curs, Reprografia Universitatii din Craiova, 1994
Colan, H., Studiul Materialelor, Ed. Dacia, Cluj-Napoca, 1988

Subject of study: Mechanics

CODE: D24NTMFL214
NUMBER OF CREDITS: 4
YEAR/SEMESTER: First year/2nd semester
TYPE OF COURSE: specialized
OBJECTIVES: The course offers the students theoretical concepts to substantiate all disciplines with mechanical character. This discipline represents the starting point for the study of phenomena that occur in the activity of the engineer, including basic scientific concepts of its activity.
CONTENT: Statics of material point. Statics of rigid (particular systems of forces, geometry masses, moments of inertia). Kinematics of material point (basic concepts, study material point movement in different coordinate systems). Kinematics of rigid (general movement of rigid, particular movement of rigid). Dynamics of material point (basic concepts, general theorems, differential equations of movement of material point). Elements of mechanical vibration (items of kinematics vibration, items of dynamic vibration).
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Sima, G., Mecanica si vibratii mecanice, Editura Universitaria, Craiova, 2009
Roşca, I., Seminar de mecanică, Ed.Matrix Rom., Bucureşti, 2001
Buculei M., Marin, M., Elemente de mecanică tehnică (teorie şi aplicaţii) Ed. Universitaria, Craiova 1994
Hegedus, A., Drăgulescu, D., Probleme de mecanică, dinamică, Ed. Helicon, Timişoara 1993

Subject of study: Preparing for mariner

CODE: D24NTMFL215
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 1st year/2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts about ship knowledge in general. It is a contribution for development of the mariner knowledge about the inland vessels. The course develops the basic practice and theoretical knowledge for mariner activities, the general terminology of this branch.
CONTENT: The general terminology of ship's parts, ropes, deck sistems, gears, intalations.
Masting, rigging, sails. Anchjorage sistems, anchors, chains, steering gears.Rscue ang usage

boats. Ships maintenance, waterproofing doors and hatches.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Dictionar de marina –A.Bejan si M.Bujenita-Editura militara Bucuresti 1979,
Instalatii navale de bord,constructie si exploatare-I.C.Ionita si J.Apostolache-Editura tehnica 1984,
Manual de marinarie-M.Bujenita 1951,
Indrumator marinaresc-M.Bujenita si N.Nigaru-Editura tehnica Bucuresti 1951,
ABC-ul marinarului-ing.Ionescu Ghe. Si Manole I.-Editura tehnica 1976,
Notiuni de greement,matelotaj si manevra ambarcatiunilor-Isbasescu Gh.-Editura Albina 1936,
Croaziera cu vele –Radu Theodoru si Teodor Asimit-Editura Albatros Bucuresti 1985,
Teoria navei-ing.I.Miulescu si ing.I.Cimpan-Editura militara Bucuresti 1973,
« allpha » marine equipment-catalog materiale si subansamble-Site www.allpa.nl,
« Catalogue of marine accessories »-Site www.eval.gr,
«Watersportaccessoires»-site www.lankhorsttaselaar.nl,
« Vetus »-Site www.vetus.de.

Subject of study: English language I + II

CODE: D24NTMFL108 + D24 NTMFL 216
NUMBER OF CREDITS: 3 + 3
YEAR/SEMESTER: 1st year/1nd + 2nd semester
TYPE OF COURSE: domain
OBJECTIVES: The course is designed to help students understand English words and paragraph and that is very important to understand English language
- Knowledge the necessary notions in English language for machine mechanisms and machinery;
CONTENT: 1. An introduction into Engineering Materials Technology (Production phase, usage, recycling), Present Simple and Continuous
The braking system in power cars (how brakes work, the concept of green brakes, ecological materials for brakes), describing events with Past Simple and Continuous
Composite technology (definition, applications, making a speech), Present Perfect vs. Past Simple, role-play
High voltage cables (description, materials, uses), means of expressing the Future
Describing properties of materials (using adverbs of manner), noun formation, vocabulary (describing tools, properties, uses), role-play
Describing components and assemblies (plugs and sockets), presenting advantages and disadvantages
Manufacturing techniques (drilling, flame-cutting, milling, sawing, shearing)
Describing position of assembled components (cluster ballooning), prepositions for describing position, The Passive Voice, Engineering design-working with drawings (plan, cross-section, exploded view, elevation, schematic, specification), describing details Inventions: the incandescent lamp, present and past tenses revision
Working with complex numbers, mathematical operations, fractions, Greek and Latin numeric prefixes**TEACHING**
Characteristics of Materials, Some Phrases for Academic Writing Property, Some Phrases for Describing Figures, Diagrams and for Reading Formulas, Grammar: Comparison, Processing and Performance, Classification of Materials, Grammar: Verbs, Adjectives, and Nouns followed by Prepositions
Metals, Introduction .Mechanical Properties of Metals, Important Properties for Manufacturing
Metal Alloys.Case Study, Ceramics, Structure of Ceramics, Word Formation: Suffixes in Verbs, Nouns and Adjectives Properties of Ceramics, Case Study: Optical Fibers versus Copper Cables, Grammar: Adverbs II
Polymers, Word Formation: The Suffix -able/-ible, Properties of Polymers
Case Study: Common Objects Made of Polymers Grammar: Reported Speech (Indirect Speech) Polymer Processing
Composites, Case Study: Snow Ski, Grammar: Gerund (-ing Form)
Case Study: Carbon Fiber Reinforced Polymer (CFRP)
Word Formation: Prefixes, Advanced Materials, Semiconductors, Case Study: Integrated Circuits
Advanced Materials, Smart Materials, Nanotechnology, Case Study: Carbon Nanotubes, Grammar: Modal Auxiliaries
Technical Writing , Punctuation and capitalization, Making corrections and improvements on written drafts
Being concise, Writing style - creating a warm, professional tone, Text abbreviations, Short words for emails and text messages, Identifying parts, Engine part vocabulary
LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1.Vince, M, Advanced Language Practice; Macmillan Publishers, 2003;
2. Universitatea Politehnică din Bucureşti,ICPE, CNR-CEI, Dicţionarul Terminologiei Electrotehnice Standardizate (Român-Englez, Englez-Român), Editura tehnică, Bucureşti 1996
3. Williams, Ivor, English for Science and Engineering, Thomson ELT, Edwards Brothers, 2007
4.Bălăcescu, Ioana, English for Geographers with Environmental Speciality, Craiova:Editura Universitaria,2009
5. Eisenbach, Iris,English for Materials Science and Engineering , Vieweg+Teubner ,2011
6. Williams, Ivor, English for Science and Engineering, Thomson ELT, Edwards Brothers, 2007

Subject of study: Physical education and Sport I + II

CODE: D24NTMFL109+ D24NTMFL217
NUMBER OF CREDITS: 1+ 1
YEAR/SEMESTER: 1st year/1nd + 2nd semester
TYPE OF COURSE: complementary
OBJECTIVES: the course is intended for students in order to preserve their health, increase their resistance to effort, harmonious physical development and create some sporting skills.

CONTENT: 1.-Running with changing tempo after 50m. and then 100-150m (3/4.2 / 4.4 / 4.2 / 4).
-Conduction of the ball (repeat); depriving the opponent of the ball (learning) - football.
2. -Processing an application hall of the hall with climbing, climbing, jumping, transport of weights.
-Service - pick-up - pass (complex of procedures) passes from the top, bottom in 2 and 3 players (volleyball)
3. - Initial testing through room tests
-Mark, demarcation in relation 1-1 free on the whole ground (basketball)
4. -Dribling, walking - repeating items in different variants (basketball); playing 5x5 with focus on tracking balls at the board.
5. Attack crash - learning the impulse, beat, jump, landing (volleyball); a two-way game with an emphasis on performing the service and attack strike in different areas.
6. -Dropping the ball in dribbling - learning; 5x5 game with emphasis on this technical process.
Taking the ball out of work - repeating with emphasis on excessive leg flexion. Bilateral game with emphasis on taking two hands down.
TEACHING LANGUAGE: Romanian
EVALUATION: sports tests
BIBLIOGRAPHY (selective):

Mangra, G.I., - Tenis de masă, Editura Universitaria Craiova, cod 130 CNCSIS, ISBN 978-606-510-170-8, 2008.
Lică, E.M., Mangra, G.I., - Tenis de masă - iniţiere în tehnica jocului, Editura Universitaria Craiova, cod 130 CNCSIS, ISBN 973-742-443-3 ISBN 978-973-742-443-3, 2006.
Mangra, G.I., - Exerciţii şi jocuri dinamice, Editura Universitaria Craiova, cod 130 CNCSIS, ISBN 973-742-009-8, 2005.
Mangra, G.I., - Managementul sportului, Editura Universitaria Craiova, cod 130 CNCSIS, ISBN 973-8043-592-2, 2004.
Mangra, G.I., Popa, G.M., Gheţu, R.B., - Exerciţii şi jocuri motrice pentru şcolari, Editura Universitaria Craiova, cod 130 CNCSIS, ISBN 973-8043-432-2, 2004.
Burcea, G., Orţănescu, C., Burcea, R., Mangra, G.I., - Handbal - Elemente de teorie şi metodică, Universitatea din Craiova, Facultatea de Educaţie Fizică şi Sport, Curs editat în Reprografia Universităţii din Craiova, 1999.

Subject of study:
Technical drawing and infographics

CODE: D24NTMFL320
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 2nd year/1nd semester
TYPE OF COURSE: domain
OBJECTIVES:
The course is designed to help students understand the importance of Technical drawing and infographics
- Knowledge in the representation of machine mechanisms and machinery;
CONTENT: Releasable assembly. Assemblies with feathers. Threaded assemblies.Non-demountable assemblies.Welded assemblies. Classification. Welding mark.Gears and transmissions. Gears with gears. Chain transmissions. Belt transmissions.Bearings. Bearings for sliding. Rolling Bearings. Representation. Designation.Surface quality and tolerances. Signs of quality of processed surfaces. Tolerances and adjustments. Drawing the conventional quality signs and tolerances and adjustments on the drawing.Execution of the technical drawing. Formats used. Execution of the technical drawing on a scale. Drawing of the sub-assembly and the whole.Technical documentation. Drawing up the operation drawing. Drawing up the datasheet
TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective):

1. R. Păunescu, Desen tehnic și infografică , Universitatea din Brasov,
2. C-tin Dale, Th. Nițulescu, P. Precupețu, Desen tehnic industrial pentru construcții de mașini, Editura Tehnică București 1990
3. Al. Ene, Desen tehnic industrial, Editura Avrămeanca, Craiova,1993
4. Al. Ene, Desen geometric, Craiova, 1992
5. Traian Popescu s.a., Desenul tehnic de la schita la ansamblu, Editura Universitaria Craiova, 2006
6. *** STAS desen tehnic Seria U10

Second year of study:

Subject of study:
Numerical Methods

CODE: D24NTMFL429
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 2tnyear/2nd semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students basic theoretical and practical concepts regarding the most important numerical techniques and their applications in solving problems, and the implementations of algorithms in numerical calculus programms.
CONTENT: Basic concepts(numerical versus analytical methods, errors). Numerical methods for linear systems of equations. Numerical methods in matriceal calculus. Method of succesive approximations and applications. Methods for solving nonlinear equations and systems. Approximation of functions. Numerical integration. Numerical solutions of ODE.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

Grecu Luminita, Metode numerice cu aplicatii in C/C++, Editura Universitaria 2009
Valeriu Iorga, Boris Jora, Metode Numerice, Editura Albastra, 2008
Adela Ionescu, Mihai Costescu, Luminiţa Grecu, - Elemente de calcul numeric. Modele computaţionale, Editura Universitaria Craiova, 2005.
Dincă Al., Ebâncă D., Ţăndăreanu N.-Calcul numeric şi aplicaţii, Universitatea din Craiova,1985.
Ebâncă D.- Metode de calcul numeric, Ed. SITECH, Craiova , 1994.

Postolache M. Metode nemerice, Ed.Sirius, Bucureşti 1994
Ghinea M., Fireteanu V., MATLAB - calcul numeric, grafica, aplicatii, Teora, 1999
Curteanu S., Initiere in MATLAB, Ed. Polirom, 2008.

Subject of study: Special matematics

CODE: D24NTMFL321
NUMBER OF CREDITS: 4
YEAR / SEMESTER: year II/ 1st semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course aims to familiarize the students with the Special matematics and basic statistical concepts and features, and also with the mathematical framework needed for statistical and informational processing of the data obtained in various measuring processes.
CONTENT. Special matematics elements, Event, probability, random variable. Typical values used in the study of the repartition for the measuring results and errors. Classical repartitions. Statistical series. Typical values of the distribution series (the indexes of the central trend, mean, median, dominant) Correlation – definition, types, basic methods. Elements of poll theory and methods.
TEACHING LANGUAGE: romanian
EVALUATION: written examination
BIBLIOGRAPHY (selective)

Adela Ionescu. Informational processing of measuring data. Editura Reprograph Craiova, 2007
N. Vasilescu, M. Costescu, C. Ionascu, G. Babucea, V. Tomita, D. Stuparu. Statistica, Editura Universitaria, Craiova, 2003
M. Costescu, N. Vasilescu, C. Ionascu. Statistica si elemente de teoria sondajului. Editura Reprograph, Craiova 2000
M. Tiron. Prelucrarea statistica si informationala a datelor experimentale. Editura Tehnica Bucuresti. 1976.

Subject of study: Basics of Computer Aided Design I + II

CODE: D24NTMFL322 + D24NTMFL430
NUMBER OF CREDITS: 3 + 3
YEAR/SEMESTER: 2 year/1st and 2nd semester
TYPE OF COURSE: fundamental
OBJECTIVES: Basics of the computer aided design – 2D drawing and 3D modeling using surface and solid features. Ability to developed engineering CAD drafts from 3D computer models. Parametric design concepts, assembling, associative drafting development, basic engineering design concepts. Numerous exercises from laboratory classes will develop to students, strong abilities for using SolidWorks package.
CONTENT: The role of a CAD system in the production cycle. Analytic representation of curves and surfaces used in CAD system. Modeling elements: layers, colors, line types. Wireframes modeling, entities selection, copy, move, editing features. Drafting, tolerances, formats, sections, views, hatching. 3D modeling using surfaces, primitives, revolution, extrusion, sweeping, lofting, blend, offset, filet and corners operations on solids. Solids editing, sketching features and concepts, profile, path 2D/3D cutting, splitting, design using features as holes, drafts, fillets, shells, sweeps, ribs, chamfers. Parametric modeling using relations and Excel sheets. Assembling, degrees of freedom, components table, interference checking.
TEACHING LANGUAGE: Romanian
EVALUATION: Computer examination.
BIBLIOGRAPHY (selective):

Bazele proiectării asistate de calculator, Note de curs, Roşca A., Reprografia Universităţii, 2001
Viviana FILIP, Cornel MARIN, Lucian GRUIONU, Alexis NEGREA, Proiectarea, modelarea, simularea sistemelor mecanice, utilizând SolidWorks, CosmosMotion şi CosmosWorks, Valahia University Press, Târgovişte, 2008.
Proiectarea în plan cu Autocad R12, Roşca A. ş.a., CERTI 1995
Proiectare asistată, Mazilu D., Note ce curs, Reprografia Universităţii, 1999
*** Documentaţia de firmă SolidWorks.

Subject of study: Strength of Materials I + II

CODE: D24NTMFL323 + D24NTMFL431
NUMBER OF CREDITS: 4+3
YEAR/SEMESTER: 2nd year / 1st+ 2ndsemester
TYPE OF COURSE: Domain
OBJECTIVES:
Dissemination of information regarding the main aspects of the mechanical resistance of materials is the main objective. Offering to the students the methods of analysis and calculation specific to the mechanical resistance of materials is objective as well.
CONTENT:
1. Generalities
2. Stresses in transversal sections of bars
3. Tensile and compression
4. Conventional calculation in shear of bars
5. General stress and strain status
6. Applications

1. Static momentum, momentum and inertia radius. Resistance Modulus. Variation of the inertial momentum.
2. Twisting of circular bars
3. Bending of bars. Definitions. Clasifications of the bending loadings
4. Stress diagrams, N, T,Mi. Conventions of signs. Normal and tangential stress in bended bars.
5. Strain of bended bars

TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective):

Savu, I.D. – Mechanical Resistance of Materials – Course notes
Deutsch, I. – Mechanical Resistance of Materials, Ed. Didactică şi Pedagogică, Bucuresti, 1979
Cernăianu, E., Tarniţă, D. – Mechanical Resistance of Materials, Reprografia Universităţii din Craiova, 1995
Babeu, T. - Mechanical Resistance of Materials, Litografia UTT, Timişoara, 1991
Cristuinea, C. - Mechanical Resistance of Materials, Litografia IPTVT, Timişoara, 1981

Subject of study:
Thermotechnics I + II

CODE: D24NTMFL325 + D24NTMFL432
NUMBER OF CREDITS: 3 + 3
YEAR/SEMESTER: 2nd year/1st and 2nd semester
TYPE OF COURSE: domain
OBJECTIVES: The course offers the students theoretical and practical concepts of the thermodynamics of the heating processes
CONTENT: Fundamentals: thermodynamic system, state, state parameters and functions, equation, state equations, mechanical work, heat, internal energy, entalpy. Thermodynamic properties of the pure substances. Phases, parts, homogenous and heterogenous system. P-V-T surface. P-V, V-T, P-T diagrams. Clausis-Clapeyron equation. Specific heats. Thermal analysis of the ideal and real gases. Themodynamic fundamentals of the burning processes. Fuels. Reaction heat. Material balance of the burning process. I-T diagram.
TEACHING LANGUAGE: Romanian
EVALUATION: Written
BIBLIOGRAPHY (selective):
Nicolescu, s.a. – Apps in thermotechnics and thermal machines, SDP Publishing House, Bucharest, 1962.
Bică M., Călbureanu M., Cernăianu C., Gabriela Demian-Heat transfer, ICMET Publishing House, Craiova 2003, ISBN 973-86650-0-0
Savu, S – Course notes

Subject of study: Electromagnetic engineering and electrical machines I + II

CODE: D24NTMFL326 + D24NTMFL433
NUMBER OF CREDITS: 3+3
YEAR/SEMESTER: 2nd year/ 1st and 2nd semester
TYPE OF COURSE: domain
OBJECTIVES: The course offers to students theoretical and practical concepts regarding electromagnetic phenomena, electric circuits analysis, construction and operating of electrical machines.
CONTENT: Electric and magnetic status. Interdependence of electrical and magnetic parameters. (General laws. Magnetic circuit law, Faraday ' s law, a.s.o.). Electrostatic field, potential difference, voltage. Static electriokinetic regime. DC electrical circuits. Electrical circuits in variable regime.
Electrical circuits in permanent sinusoidal periodic regime.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Şora C. - Bazele electrotehnicii, Editura didactică şi pedagogică, Bucureşti, 1982
Nicula Al., Cristea Gh., Simon S. - Electricitate şi magnetism, Editura didactică şi pedagogică, Bucureşti, 1982
Priboi M. - Electrotehnică, Editura Sitech, Craiova, 2001
Răduleţ R. - Bazele electrotehnicii. Probleme. Vol.I+II, Editura didactică şi pedagogică, Bucureşti, 1970
Bălă C. – Maşini electrice, Editura Didactică şi Pedagogică., Bucureşti 1982
Câmpeanu A. – Maşini electrice. Probleme fundamentale, speciale şi de funcţionare optimă, Editura Scrisul Românesc, Craiova 1988

Subject of study: Materials technology

CODE: D24NTMFL434
NUMBER OF CREDITS: 3
YEAR/SEMESTER: First year / 2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: Discipline "Materials technology" aims to familiarize students with the main ways of obtaining metallic materials and their equilibrium diagrams and the main methods of processing materials. Emphasis is placed on acquiring key technologies, phenomena and processes which matter through to become a finished product. This knowledge, provided to the students are required to understand the manufacturing processes and as well the activities of exploitation and repair the equipment. Moreover, the knowledge gained may allow improvement of technological processes.
The main objective is the acquisition of the method to obtain a particular product.
CONTENT: Purpose and importance of technology materials, metal materials, classification and properties, primary development, Cast iron. Developing cast iron, steels. Develop steel, non-ferrous materials. Ferrous materials development, secondary development, casting metals, Physical basis of casting, casting methods, processing methods by plastic deformation of metallic materials, hot and cold plastic deformation, erosion processing; powder aggregation processing, permanent joints; welding, soldering joints, Cutting, metal, Protection of metallic materials against corrosion, control of non-metallic materials
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral
BIBLIOGRAPHY (selective):
Aurel Nanu – Tehnologia Materialelor – Editura Didactică şi pedagogică 1983
Mihai Demian - Tehnologia Materialelor, Indrumar de laborator — Editura Universitaria 2009
Sever Şontea - Tehnologia Materialelor - Craiova 1980
Vasile Popovici - Tehnologia Materialelor - Editura Politehnica 1985
M. Demian, C. Gârniceanu - "Materiale şi tehnologii primare" Ed. Scrisul Românesc 2002 .

Subject of study:
Ports and waterways

CODE: D24NTMFL324
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 2st year/1nd semester
TYPE OF COURSE: domain
OBJECTIVES: Knowledge, understanding, explanation and interpretation of the design, construction and operation of inland waterways. Knowledge, understanding, explanation and interpretation of port activities resulting from the economic efficiency of water transport
CONTENT: Water transport. Technical and economic characteristics of water transport. The main traffic indicators. The waterway. Definitive classifications. Navigation gauges. Radius of

curvature and curvature of the waterways. Laying of waterways. Methods of arrangement. Waterways. Navigation Locks. Main dimensions, water calculation levels. Ports waiting at the locks. Traffic capacity of the lock. Fill-drainage systems. Location and Functions of Ports. Classification. Factors influencing port design. Traffic. Ships for transport. Natural conditions. Port plan and construction elements. Territory of the port. Acvatoriu. Mooring Front. Specialized sections of port - terminal activities. Ports in Romania. Danube ports. Seaports. Inland Navigation Network of Romania. Danube, Danube-Black Sea Channel, Poarta Albă-Midia-Navodari Channel. Constanta Maritime Port.

TEACHING LANGUAGE: Romanian

EVALUATION: Written/oral examination

BIBLIOGRAPHY (selective): 1. Bîcov, A. Porturi. Reprografia Universităţii „Politehnica" Timişoara,1996. 2. Ciortan, R. Amenajări portuare. Ed. Ovidius University Press, Constanţa, 2001. 3. Hîncu, C.D. Căi navigabile. Ed. Ovidius University Press, Constanţa, 1999 4. Hancu, Corneliu Dan Florea, Mihai- Porturi. Bucuresti: Ed. Matrix Rom, 2004 5. Milan, I.;Dragusan, A. Porturi si cai navigabile. Constanta: Ed. Academiei Navale "Mircea cel Batran", 2007 6. Popesu, V. Exploatarea navelor şi a porturilor. Ed. Ovidius University Press, Constanţa, 2002. 7. Stanca C. Exploatarea sistemelor portuare. Note de curs. Universitatea Maritimă, 2002

Third year of study:

Subject of study: Fluid Mechanics

CODE: D24NTMFL540

NUMBER OF CREDITS: 5

YEAR/SEMESTER: 3rd year/1st semester

TYPE OF COURSE: fundamental

OBJECTIVES: This course is an introduction in fundamental theory of fluid mechanics and application of these principles to solving various technical problems. Numerous examples, hydraulic machines functioning and practical problem solutions are presented to the students in laboratory classes for a better understanding of theoretical knowledge.

CONTENT:

Fluid properties. Fluid modeling models. Pressure in fluids. Cauchy equations. Static of fluids: equations, pressure distribution on plane and curve surfaces. Principle of Archimedes. Fluid kinematics. Continuum equation. Cauchy-Lagrange theorem. Potential and rotational movements. Fluid dynamics. Constitutive equation – laminar flow, Navier-Stokes equations. Bernoulli laminar flow. Hydrodynamics. Applications. Dynamic of viscous fluids. Laminar, transitional and turbulent flow. Turbulent flow equations. Laplace equation. Major loss in ducts, tubes and pipes. Darcy-Weisbach equation for pressure and head loss. Energy and hydraulic grade line. Hydraulic diameter. Water flow in tubes. Orifice, nozzle and venture flow rate meters. Pipe in series and parallel. Pumps, compressors, blowers and fans. Total pressure or head loss in pipe or duct systems.

TEACHING LANGUAGE: Romanian

EVALUATION: Written examination

BIBLIOGRAPHY (selective):

Victor L.Streeter, E.Benjamin Wylie, Fluid mechanics,McGraw-Hill International Book Company Japan,1983.

H.C.Lowe,Fluid Mechanics, The Macmillan Press Ltd. ,London ,1979

Shin-I Pai, Viscous flow theory, D.Van Nostrand Company,Inc. 1957

Dan Gh.Ionescu,Introducere in Hidraulica, Edit.Tehnica, Bucuresti,1977.

SUBJECT OF STUDY: Electronics and Automation

CODE: D24NTMFL541

NUMBER OF CREDITS: 4

YEAR/SEMESTER: 3rd year/1st semester

TYPE OF COURSE: fundamental

OBJECTIVES: The course intents to familiarize the students with the general issues of modern electronics, with the procedures that are used in the study of the electronic devices and the characteristic functions, and also with the most usual electronic circuits. Also, it will be realized an introduction in the field of the general industrial automation.

CONTENT: The general methods those are useful in electronics study. The conduction in semi-conductors. The pn junction. The semi-conductor diodes, The bipolar transistors. The electronics amplifiers. The amplification with reaction. The operational amplifiers (OA). Parameters. The linear applications with OA. The manual regulation. The automate regulation. The automate control systems. The disturbances in the unfolding the processes. Transducers. Regulators. The execution elements. The features of a control system. The modeling of the automation control systems.

TEACHING LANGUAGE: Romanian

EVALUATION: Written/oral examination

BIBLIOGRAPHY (selective):

Th. Dănilă, N. Reus, V. Boiciu, Dispozitive şi circuite electronice, Ed. didactică şi pedagogică, Bucureşti, 1982.

E. Ceangă, A. Saimac, E. Banu, Electronică industrială, Ed. didactică şi pedagogică, Bucureşti, 1981.

Elena Niculescu, I. Smarandache, Circuite electronice. Îndrumar de laborator, Reprografia Univesităţii din Craiova, 1987.

Elena Niculescu, Dorina Purcaru, Dispozitive şi circuite electronice. Culegere de probleme, Reprografia Univesităţii din Craiova, 1988.

D. Mihoc, S.Şt. Iliescu, Teoria şi Elementele Sistemelor de Reglare Automată, Ed. Didactică şi Pedagogică, Bucureşti, 1984.

C. Marin, Structuri şi legi de reglare automată, Ed. Universitaria, Craiova, 2000.

Subject of study: Theory construction and vitality ship

CODE: D24NTMFL543

NUMBER OF CREDITS: 5
YEAR/SEMESTER: 3nd year/1nd semester
TYPE OF COURSE: domain
OBJECTIVES: Specialized discipline addresses issues regarding ship types, fundamental nautical qualities, buoyancy, stability of the ship, nescufundabilitatea, ship building so the graduate can make safe decisions in the design, construction and operation of the vessel can load situations and behavior analysis of ship during navigation
CONTENT: Ship geometry. Main parts of the ship. The main dimensions of the ship. Ratios between dimensions. Plan forms. Buoyancy of the vessel. Floating parameters. Forces acting on the vessel and equilibrium equations. Calculation of weight and center of gravity coordinates of the ship. Displacement, load capacity, tonnage. Change draft of the ship at boarding or landing loads.
Initial stability. Izocarene floating . Recovery time the ship. Ship stability on trips weights. Boarding landing weights, the influence on the stability of the ship. Stability at high angles of inclination. Static stability at high angles of inclination. Dynamic stability of the ship. Methods of calculating the draft and stability to flooding of compartments. Ways and means to ensure nescufundării ship. Ship vitality.
Ship construction. Regulations and international conventions. Class ship class restrictions. Framing systems.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1. Maier V.Statica navei, vol.1, Editura Tehnică, Bucureşti, 1985
2. Maier V. Dinamica navei, vol.2, Editura Tehnică, Bucureşti, 1987
3. Maier V. Mecanica şi construcţia navei, vol.3, Editura Tehnică, Bucureşti, 1989
4. Bidoaie I..Teoria navei, curs, Universitatea din Galaţi, Reprografia Universităţii din Galaţi, 1985
5. Bidoaie A. Mecanica şi construcţia navei, Editura Didactică şi Pedagogică, Bucureşti, 1977
6. J. Popovici, V. Ceangă, "Calculul elicei", Ed. Academiei, Bucureşti, 1991.
7. Popa, Ionel ; Ali, Beazit Vitalitatea navei . Editura Academiei Navale`Mircea cel Batran` , Constanta 2003 ISBN: 9738303338
8. Vălsan El. Tehnologia fabricării navei, Editura Didactică şi Pedagogică, Bucureşti, 1974
9.Dubovan L. Teoria navei, Reprografia Universităţii din Craiova, 2000

Subject of study: Ports and waterways
CODE:
NUMBER OF CREDITS: 5
YEAR/SEMESTER: 3nd year/1nd semester
TYPE OF COURSE: domain
OBJECTIVES: The course is designed to help students understand the importance of design, implementation and operation of inland waterway, complex activities at ports resulting in great economic efficiency of water transport.
CONTENT: The transports waterway. Economic and technical characteristics of water transport. Main indicators of traffic The waterway. Classification definitions. Dimensions navigation.
The locks of waterways . Location and port functions. The area plan of port . Port area. Acvatoriu. Fronts of docking. Specialized sectors of port activities - terminal ports in Romania. The Danube ports. Seaports of Romania network waterway .
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Bîcov, A. Porturi. Reprografia Universităţii „Politehnica" Timişoara,1996.
Ciortan, R. Amenajări portuare. Ed. Ovidius University Press, Constanţa, 2001.
Hîncu, C.D. Căi navigabile. Ed. Ovidius University Press, Constanţa, 1999
Hancu, Corneliu Dan Florea, Mihai Porturi. Bucuresti : Editura Matrix Rom, 2004
Manolache, L. Porturi şi căi navigabile. Note de curs. Universitatea din Galaţi.
Milan, I.;Dragusan, A. Porturi si cai navigabile. Constanta: :Editura Academiei Navale "Mircea cel Batran", 2007
Orănescu, O., "Exploatarea navelor şi porturilor", Ed.Didactică şi Pedagogică, 1986
Popesu, V. Exploatarea navelor şi a porturilor. Ed. Ovidius University Press, Constanţa, 2002.
Stanca C. Exploatarea sistemelor portuare. Note de curs. Universitatea Maritimă, 2002

Subject of study:
Navigation equipment and systems
CODE: D24NTMFL653
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 3nd year/2nd semester
TYPE OF COURSE: domain
OBJECTIVES: The course offers students the theoretical and practical concepts of electrical and navigation on board the ship, wich ensure an proper navigation, integrity of goods transported, necessary conditions for living and activities of crew and passengers.
CONTENT: Particularities of electrical and marine navigation. Naval power plants. Indicators of IEN. The choice of current, voltage and frequency, block diagrams of IEN and C.E.N. Electric propulsion of ships. Electric propulsion of continuous current. Electric propulsion of alternating current. Requirements R.N.R. on generators and engines used in marine propulsion. Navigation devices. Destination and classification. Girocompase shipping. Cruise control, classification, block diagrams, operating principle. Ultrasonic probe, types, block diagram, working principle. Loch, types, block diagram, working principle. Navigation facilities. General terms. Navigation systems. Radar installations. Radiogoniometru. Radio navigation satellite communication facilities. Telegraph machines. Axiometer.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Bozianu, F.; Aparate electrice de navigatie / Volumul I,II . Aparate pentru conducerea navei. Iasi : Editura Gh. Asachi, 2002, ISBN 9738292697
Bozianu, F.; Bozianu, V. Tratat de echipamente de navigatie.Vol. I,II. Constanta:Editura Ex Ponto, 2007
Bozianu, Francisc Indrumar de proiectare. Echipamente si sisteme de navigatie maritima.

Editura Academiei Navale`Mircea cel Batran`, Constanta, 2003
Bozianu, Francisc Sonde ultrason navale. Note de curs. Constanta: Editura Academiei Navale "Mircea cel Batran", 2006,
Călueanu D. Instalaţii electrice la bordul navelor, Ed. Tehnică, Bucureşti 1981
Jurian, Mariana ; Popa, Dan; Radarul. Principii si echipamente . Editura Nautica , Constanta 2006
Minea M. Sisteme şi echipamente de dirijare a traficului naval, curs, Universitatea „Politehnica", Bucureşti, 2000
Nanu Dumitru Sisteme electroenergetice navale Editura Muntenia, Constanta
Nanu, Dumitru; Dobref, Vasile Instalatii electrice navale. Indrumar de laborator Editura ANMB, Constanta
Popa, Dan Tehnici si echipamente GMDSS. Editura Ervin Press , Bucuresti 2003
Tataru, Neculai Navigatie radar si radar plotting.Editura Academiei Navale "Mircea cel Batran", 2008

Subject of study: Planning and execution of the voyage

CODE: D24NTMFL656 + D24NTMFL657
NUMBER OF CREDITS: 3 + 3
YEAR/SEMESTER: 3nd year/2nd semester
TYPE OF COURSE: the specialty
OBJECTIVES: The discipline addresses specialty fundamental themes of port activities in maritime and river transport of goods.
CONTENT: Role and transport features. Facilities and port facilities. Specialized areas of port activity. Port warehouses. Technical characteristics and transport vessels. Stacking and transporting goods. General merchandise packed and unpacked. Carriage of solid bulk cargoes. Liquid bulk cargo transport. Transport of dangerous goods. Refigerate and frozen goods transport. Documents prepared for loading / unloading.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

Beziris A., Bamboi Gh. Transportul maritim Vol.I, Editura Tehnică, Bucureşti, 1988
Beziris, A.; Bamboi, Gh Transportul maritim. Probleme tehnice si de exploatare. Vol.2. Bucuresti, Editura Tehnica, 1988
Biaciu, I. Ionescu, D. Încărcarea stivuirea şi transportul mărfurilor cu nave maritime. Ed. Tehnică, Bucureşti, 1976.
Caraiani, Gheorghe Tratat de transporturi Vol 1,2 Bucuresti : Editura Lumina Lex, 2001, ISBN 9735883511
Caraiani, Gheorghe.Burada, Corneliu Transporturile fluviale. Bucuresti : Editura Lumina Lex, 1998
CERONAV, Manipularea si transportul marfurilor periculoase, Ed. Scorpion, Galati, 2003.
Hagiac, R. Transportul paletizat si containerizat al marfurilor. Bucuresti:Editura Tehnica,1977
Munteanu, Doina. Popa, Dan Stelian. Guita, Corina Irina Manipularea si transportul marfurilor periculoase. Galati : Editura Scorpion, 2003,
Popa, Catalin; Haulica, Dan Organizarea transporturilor navale. Constanta: :Editura Academiei Navale "Mircea cel Batran", 2008
Popescu, V. Îndrumar de lucrări practice pentru Exploatarea porturilor şi a navelor. Ed. Ovidius University Press, Constanţa, 1999.
Popesu, V. Exploatarea navelor şi a porturilor. Ed. Ovidius University Press, Constanţa, 2002.
Stanca C. Exploatarea sistemelor portuare. Note de curs. Universitatea Maritimă, 2002
*** Regulament de exploatare portuară a porturilor maritime româneşti Ministerul Transporturilor Construcţiilor şi Turismului, Direcţia Generală Transport Naval, CN Administraţia Porturilor Maritime SA, Constanţa, 2003

Subject of study: Navigation on inland channels

CODE: D24NTMFL658
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 3nd year/2nd semester
TYPE OF COURSE: spaciality
OBJECTIVES: The course offers the students theoretical and practical concepts regarding navigation activity on inland waterways. Teach the students the basis of the navigation principles regarding the way of the ship, the route, weather and water level predictions and convoy dimensions calculation. Evaluation of the waterway flow for navigation safety.
CONTENT: The waterflow dinamics. Channel and convoy dimentions, nautical documents. Priciples for day and night navigation. Electronik navigation, Automatic Identity Signal, Electronc Charts Display and Information Sistem, Geographical Positioning Sistem, Diferential Geographical Positioning Sistems.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

-Comisia Dunării-Carte de Pilotage du Danube vol.I-IX ediţiile 1954-1994
.-Comisia Dunării-Annuaire hydrologique –ediţiile 1990-1999
-Comisia Dunării 1964-Reguli de supraveghere fluvială aplicabile pe Dunăre
-Comisia Dunării 1965- Recomandări referitoare la modul de stabilire şi comunicare a avizelor pe Dunăre
-Comisia Dunarii -Recomandări referitoare la condiţiile tehnice pe care trebuie să le satisfacă porturile, radele şi alte locuri destinate convoaielor împinse.
-Comisia Dunării 1986-Coordonarea Serviciilor hidrometeorologice pe Dunăre
-Comisia Dunării 1958-Dispoziţii fundamentale referitoare la navigaţia pe Dunăre
-Comisia Dunării 1973-Albumul curbelor Dunării
-Comisia Dunării 1984-Planul marilor lucrări pe Dunăre în perioada 1980- 1990
-Consiliul Europei -Directiva Europeană 2005/44/EC (Directiva RIS)
-Consiliul Europei -Regulamentele RIS 414 / 415 / 416 din 2007

Subject of Study: General Economics

CODE: D24NTMFL548
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 3rd year/1st semester

TYPE OF COURSE: B
OBJECTIVES: The essential aim of the course is to train specialists in economics by accumulating theoretical and methodological knowledge necessary to understand the complexity of real economic life, economic structures' dynamics and of multiple relationships between economic agents. Another purpose is to arouse interest in economics as an e exciting and useful science. Initiation of students into this science will allow analyzing real economic situation, making the right economic decisions and acting accordingly.
CONTENT: ECONOMICS – FORM OF HUMAN ACTIVITY; ECONOMY AND ECONOMIC SCIENCES SYSTEM; MARKET ECONOMY; CONSUMER BEHAVIOR THEORY; THEORY OF MANUFACTURER, SUPPLY AND DEMAND; MARKET, COMPETITION AND PRICE; INCOME; DISTRIBUTION; MEASURING ECONOMIC ACTIVITY AT MACROECONOMIC LEVEL; LABOR MARKET AND UNEMPLOYMENT; MONETARY MARKET AND INFLATION, FINANCIAL MARKET, INCOME, CONSUMPTION AND INVESTMENTS; ECONOMIC FLUCTUATIONS.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

Angelescu, Coralia (coord.) Economie, Ed. Economică, Bucureşti, 2000.
Angelescu C., Dinu M. s.a. Economie, A.S.E., Editura Economica, Bucuresti, 2009.
Aurel Iancu, Tratat de economie, Bucureşti, Ed. Expert, 1992.
Băbăiţă I., Duţă Alexandrina, Imbrescu I., Microeconomie, Editura de Vest, Timişoara, 2004.
Ciucur Dumitru, Gavrilă Ilie, Economie, Ed. Economică, Bucureşti, 1999.

Dobrotă Niţă (coord.), Dicţionar de economie, Ed. Economică, 1999.
Dobrotă, Niţă, Economie politică, Ed. Economică, Bucureşti, 1998.
Dudian Monica (coord.), Economie, Ed. All Beck, Bucureşti, 2005.
Nechita V., Ciupercă L., Iorga A.I., Economie, Ed. Sedcom Libris, Iaşi, 2001.
Pîrvu Gh., Gruescu Costina, Microeconomie: manual universitar, Ed. Sitech, Craiova, 2005.
Vîrjan Daniela, Economie, Editura ASE, Bucureşti, 2009.
Milea Claudia, Economie generală, Ed. Universitaria, Craiova, 2010.

Subject of study:
The basics of radiolocation and hydrocolocation
CODE: D24NTMFL655
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 3nd year/2 nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts about the basis of radio transmissions and receptions and the role of radio communication between the inland vessels (radio connections between ships, ships and shore, internal communications). In the same time the target is to familiarize the students about the radio handling on bord of inland vessels and using the standard naval vocabulary, as a possibility to increase the safety and reduce the accidents.
CONTENT: International regional Convention about radio traffic in Very High Frecvency. Different type of messages, danger (MayDay), emergency(PanPan),security (Securite) and usual messages.The official rules for the composion of the messages and the responses to these messages. Rules about the radio stations and the opaerators.Channels and frequences, tipes of conections.The rules about the radio stations, technical and handling rules.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

. Acordul regional cu privire la servicul radiotelefonic pe căile de navigaţie interioară (Bâle, 6 aprilie 2000)
. Regulamentul staţiilor de radiocomunicaţii din România
. Regulamentul personalului de operare a staţiilor de radiocomunicaţii din România
. Ordinul Ministrului Transportului nr. 244/26.02.1972
. Hotărârea privind stabilirea şi sancţionarea contravenţiilor în domeniul radiocomunicaţiilor şi al protecţiei radioelectrice.

Subject of study:
Machine organs and mechanisms
CODE: D24NTMFL546 + D24NTMFL651
NUMBER OF CREDITS: 5 + 3
YEAR/SEMESTER: 3nd year/1nd + 2nd semester
TYPE OF COURSE: domain
OBJECTIVES: The course is designed to help students understand the importance of design
- Knowledge of the necessary notions in the representation of machine mechanisms and machinery;
- Knowledge of the application states studied and applied to the machine organs in operation.
CONTENT: Introduction, Mechanism structure, Mechanics kinematics, Dynamic analysis, Mechanics of the mechanism, Camshafts, Helical gear transmissions, Gear transmissions, Belt transmissions, Chains transmissions, Demountable assemblies, Non-assembled assemblies, Axles and shafts Pivots, Friction gears, Mechanical drives, Couplings, Elastic couplings
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

1.Dumitru N., Margine A., Organe de maşini. Asamblări. Elemente elastice. Proiectare asistată de calculator. Editura Universitaria Craiova, 2002.
2.Dumitru N., Margine, A., Catrina, Gh., ş.a., Organe de maşini. Arbori şi lagăre. Proiectare asistată de calculator, Editura Tehnica, Bucureşti, 2008, ISBN 978-973-31-2332-3.
3.Dumitru, N. Margine, A.,Asamblări. Elemente elastice. Proiectare asistată. Editura Universitaria, Craiova, 2002.
4.Dumitru, N., Angrenaje cilindrice. Proiectare asistată de calculator, Ed.Universitaria,Craiova, 2000
5.Dumitru, N., Nanu, Gh., Mecanisme şi transmisii mecanice, Editura Universitaria , Craiova, 2008.

6.Dumitru, N.,Organe de maşini.Angrenaje. Elemente de proiectare, R. Univ. Craiova, Craiova, 1996.
7.Dumitru, N., Organe de maşini. Transmisii mecanice, R. Univ. Craiova, Craiova,1996.

Subject of study:
Prevention of environmental pollution

CODE: D24NTMFL659
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 3st year/2nd semester
TYPE OF COURSE: specialized
OBJECTIVES: identifying the main sources of pollution on board ships and the technical means of limiting pollution, organizing deployment operations on board the ship. Understanding, explaining the analysis and solving specific problems in the field of pollution and rules for preventing water pollution.

CONTENT: 1. Introduction. 2.Prevention of water pollution. 3. Sources of pollution, effects of pollution, pollutants. 4. Control organizations. 5. International collaboration in the fight for the prevention of transboundary pollution of Danube waters by navigational activity. 6. Technical requirements imposed on ships to prevent pollution. 7. Measures against water pollution. 8. Requirements for ships to prevent and reduce navigational accidents: actions taken in the event of fire or explosion, action taken in the event of a collision, actions in case of structural damage, actions in case of excessive inclination. 9. The current dimensions of environmental pollution. 10. Main IMO Conventions ratified by the Romanians: SOLAS, MARPOL, COLREG, TONMAGE
TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective): 1.Baiciu I. Încărcarea, stivuirea şi transportul mărfurilor cu nave maritime,Ed. Tehnică, Bucureşti,2005. 2. Holan A. Transportul, expediţia şi asigurările internaţionale EDP. Bucureşti, 1975. 3. Ciplea L. Poluarea mediului ambiant, Ed. Tehnică, Bucureşti, 1977. 4. Ronam P. Introducere în fizica poluării fluidelor,Ed. Ştiinţifică şi Enciclopedică, Bucureşti, 1980. 5. Mazilu Mirela., Ecologie şi protecţia mediului înconjurător, Ed. Mirton, Timişoara, 2007. 6. Pătrăuceanu D., Îndrumar privind prevenirea şi combaterea incendiilor la bordul navei CDPT.

Fourth year of study:

Subject of study: Installations of board and deck

CODE: D24NTMFL765
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 4nd year/1nd semester
TYPE OF COURSE: Optional specialty
OBJECTIVES: Discipline through lectures and practical work, to made theoretical and experimental study of each type of installations on board, operation and malfunction their.
CONTENT: Hydropneumatic characteristics of naval installations. Installations of loading / unloading. The steering equipment. The anchoring equipment. Mooring and tying ships . Towing. Salvage equipment. Handling facility covers. Propulsion system. Bilge ballast system. Oil separator residues. Fire equipment. Plumbing equipment. Operation, maintenance and overhaul of naval installations.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Ceangă, V., Lungu, A., Paraschivescu, C., Ploeşteanu, C., Instalaţii navale de punte - Academica, 2000, Galaţi
Dragalina, Al.;Costiniuc, C.;Florea, T.; Dancu, C. Masini si instalatii navale. Constanta:Editura Muntenia, 2007
Ioniţă, I.C.Jimbu, A. Instalaţii navale de bord. Editura Tehnică, Bucureşti, 1986
Nicolae, Florin. Masini si instalatii navale. Volumul I Editura Ex Ponto , Constanta 2003
Panaitescu, M. Panaitescu V. Maşini şi instalaţii navale. Editura EX PONTO, Constanţa, 2001
Patrichi, I. Tehnologia intretinerii si repararii masinilor si instalatiilor navale. Constanta:Editura Academiei Navale "Mircea cel Batran", 2000
Patrichi, Ilie Exploatarea si repararea instalatiilor si sistemelor navale. Editura Academiei Navale`Mircea cel Batran`, Constanta 2000
Popa, Ionel Instalatii si sisteme auxiliare de bord. Editura Academiei Navale`Mircea cel Batran` , Constanta, 2004
Popa, Ionel Instalatii mecanice si hidropneumatice navale Editura Muntenia, Constanta
Roman, C. Instalaţii şi sisteme navale funcţionale. Litografia Institutului de marină „Mircea cel bătrân", Constanţa, 1981
Tolea, S. Prevenirea si stingerea incendiilor la bordul navelor maritime, fluviale si portuare (cunoasterea tehnicii din dotare). Constanta, 1980

Subject of study: Organizing and leading the crew

CODE: D24NTMFL766
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 4nd year/7nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts regarding the

main aspects about the activity of the crew on board of the inland vessels. Teach the students about how to organize and lead the crew during navigation and cargo handling.
CONTENT: The bindings and atributions regarding organizing and leading the crew. Whath kind of competences of the leader might be given to the other crew member. Interacvtions between the members of the same proffesional group. Criteria regarding organizing and leading different activities of the crew.Tiredness efects and it's tendency.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Curs IMO model 1.21.:Proloficienci in Personal Safety and Social Responsabiluities
Ghid pentru dezvoltarea resurselor umane CPPMC Constanta
Santion F.-Caracteristici pasihologice si psihosociale ale vietii si activitatii la bordul navelor
W.Wagwnoar – Personalul Injury Prevention
Rolul comandamentului in colectarea evidentelor – Institutul nautic Londra
Competenta in probleme de protectie individuala responsabilitati sociale la bordul navei CPPMC Constanta
Managementul performantei si evaluarea angajatilor –Curs CODECS
Managementul general al firmei.
Regulamentul serviciului la bordul navelor fluviale

Subject of study: Inland navigation, coastal waters and sea navigation I + II

CODE: D24INTMFL769 + D24NTMFL878
NUMBER OF CREDITS: 4 + 4
YEAR/SEMESTER: 4nd year/ 1 st and 2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts regarding navigation activity on inland waterways. Teach the students the basis of the navigation principles regarding the way of the ship, the route, weather and water level predictions and convoy dimensions calculation on different Danube sectors. State some practical knowledge achieved during summer practice.
CONTENT: Applyence the theoretical knowledge about the waterflow dinamics, channel and convoy dimentions, nautical documents, priciples for day and night navigation. Utilisation of the electronik sistems for inland navigation AIS, ECDIS.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
-Comisia Dunării-Carte de Pilotage du Danube vol.I-IX ediţiile 1954-1994
.-Comisia Dunării-Annuaire hydrologique –ediţiile 1990-1999
-Comisia Dunării 1964-Reguli de supraveghere fluvială aplicabile pe Dunăre
-Comisia Dunării 1965- Recomandări referitoare la modul de stabilire şi comunicare a avizelor pe Dunăre
-Comisia Dunarii -Recomandări referitoare la condiţiile tehnice pe care trebuie să le satisfacă porturile, radele şi alte locuri destinate convoaielor împinse.
-Comisia Dunării 1986-Coordonarea Serviciilor hidrometeorologice pe Dunăre
-Comisia Dunării 1958-Dispoziţii fundamentale referitoare la navigaţia pe Dunăre
-Comisia Dunării 1973-Albumul curbelor Dunării
-Comisia Dunării 1984-Planul marilor lucrări pe Dunăre în perioada 1980- 1990
-Consiliul Europei -Directiva Europeană 2005/44/EC (Directiva RIS)
-Consiliul Europei -Regulamentele RIS 414 / 415 / 416 din 2007

Subject of study: Ships bussines administration I + II

CODE: D24NTMFL770 + D24NTMFL879
NUMBER OF CREDITS: 3 + 3
YEAR/SEMESTER: 4nd year/1st and 2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts about applicability of transportation contract. Knowledge about technique and commercial/ mercantile parameters are essential to achieve an efficient transportation and without loses. The "control of looses" applying insurance rules such P&I or Lloyd.
CONTENT: The law of the commercial deal,requrenments. INCOTERMS rules.Freight contract,types of deals. Good navigability status of the vessel. Charging documente,cargo documents,time sheet,cargo list,bill of lading, types of bills.Insurance contracts.York-Anvers rules,gross average and particular average.Damage report and sea protest.Naval accidents analise.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1.Mircea Costin – Dreptul comertului international Ed.Lumina Lex,1997
2.Ion Dogaru – Contractul ,Ed.Scrisul Romanesc, 1983
3.Sergiu Deleanu – Contractul de comert. Ed. Lumina Lex,1995
4.Octavian Capatina – contractul comercial de transport,Ed Lumina Lex,1995
5.Doinita Horent – Formele contractuale ale navlosirii in comertul maritim,Ed Lumina Lex, 1997
6.Gheorgeh Stanciu – Dreptul de retentie,gajul si privilegiul carausului asupra marfii tarbnsportate,Ed.Lumina Lex,1999
7.Octavian Capatina – Dretul transporturilor, contractul de exceptie a marfurilor,Ed.Lumina Lex,1997
8.Gheorghe Filip – Dreptul Transporturilor, Ed.Sansa SRL,1996
9.Gheorghescu Ion Bacanu – Drept comercial roman,Ed Lumina Lex,1994

Subject of study:
Maritime and river towing

CODE: D24NTMFL773
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 4nd year/2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts for inland

navigation and towing, transport and salvage using river tugs.
CONTENT: Inland tug handling, evolution, clasification, procedures, towing techniks. Different inland tugs type,harbour types,. Evaluatuion of the stability of the harbour tug, how to compond the inland towed barge convoi and towing activity in different conditions. Tipical towing manouvres . Towing for salvage/recue, refloating manouvres, special towing.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1. RECOMMANDATIONS RELATIVES A L'ETABLISSEMENT DES GABARITS DU CHENAL,DES OUVRAGES HYDROTECHNIQUES ET AUTRES SUR LE DANUBE –Comisia Dunării – Budapesta 1988
2. CARTE DE PILOTAGE DU DANUBE DU KM.0 AU KM.2223 –Comisia Dunării –Budapeste 1989 – 1997,vol, I - IX
3. DESCRITION DU CHENAL,DES DANGERS NAUTIQUES ET DU BALISAGE - Comisia Dunării –Budapesta 1961
4. Constantin Savin - Hidrologia râurilor-teoretica şi aplicată - editura Reprograf Craiova 2001,
5. Regulamentul de navigaţie pe Dunăre în sectorul românesc –Inspectoratul de Stat al Navigaţiei Civile -ediţia 1993,
6. CEVNI. -European code for inland waterways-revision 2 –United Nations-Economic-Commission For Europe Inland Transport Committee 2002,
7. Navigaţia şi manevra navelor fluviale-P.S.Bontideanu-Editura tehnica 1958,
15. « Cai Navigabile »-Note de curs – Politehnica Timisoara facultatea de Constructii Hidrotehnice
8-Tratat de Manevra Navei-Deboveanu Marin ed.II – Lumina Lex.

Subject of study: COLREG- Collision regulation
CODE: D24NTMFL775
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 4nd year/1nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts about how inland navigation vessels may apply the COLREG rules in mixed navigation zone, inland and sea going vessels.
CONTENT: General definitions,rules for under way vessel, navigation general rules for crew, steering the vessel in difficult conditions,vessels which see each other, vessel manouvring in difficult conditions, lights and signs, acustic and light signals,special signals, search and rescue procedures.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1 COLREG-Regulamentul International de prevenirea abordajelor pe mare
2.CEVNI- Regulamentul international de navigatie pe caile navigabile interioare- 2007

Subject of study: Enforcement proceedings navigational watchkeeping
CODE: D24NTMFSL772
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 4nd year/1nd semester
TYPE OF COURSE: Optional specialty
OBJECTIVES: Discipline through lectures and practical work, to realize theoretical and experimental study of naval propulsion instalation in order to design, study and exploit them.
CONTENT: Classification of propulsion instalation . The engine of shipping. Transmission systems. Instalation steam turbine propulsion. Propulsion plant gas turbine . Propulsion plant with internal combustion engines. Electric propulsion. Marine engines. Propeller. Voigt-Schneider propulsion. Propulsion with propellers. Water jet propulsion.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Alexandru, C., „Masini si instalatii navale de propulsie",Editura Tehnica, Bucuresti.,1991.
Creta, I., „Turbine de abur si gaze", Editura Didactica si Pedagogica, Bucuresti., 1980.
Dumitru, Gh., „Masini si instalatii de propulsie navale",vol.I si II, Univ. din Galati, 1979.
Ioniţă, I.C.Jimbu, A. Instalaţii navale de bord. Editura Tehnică, Bucureşti, 1986
J. Popovici, V. Ceangă, "Calculul elicei", Ed. Academiei, Bucureşti, 1991.
Nicolae, Florin. Masini si instalatii navale. Volumul I. Editura Ex Ponto , Constanta 2003
Panaitescu, M. Panaitescu V. Maşini şi instalaţii navale. Editura EX PONTO, Constanţa, 2001
Roman, C. Instalaţii şi sisteme navale funcţionale. Litografia Institutului de marină „Mircea cel bătrân", Constanţa, 1981
Samoilescu, Gh. Instalatia de propulsie electrica a navei Editura ANMB, Constanta
Simionov, M., „Instalatii de propulsie navale. Linii de arbori", Editura Evrika, Braila., 2001.
Valeriu Ceangă, Costel Iulian Mocanu, Cristian Teodorescu "Dinamica sistemelor de propulsie", Ed. Didactică şi Pedagogică, Bucureşti, 2003.

Subject of study: Regulations for Danube and Channel navigation
CODE: D24NTMFL776
NUMBER OF CREDITS: 5
YEAR/SEMESTER: 4nd year/2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers to the students theoretical and practical concepts for inland navigation, applying manoeuvring regulation , visual and acoustical signalisation rules, navigation dimensions of the convoys, signals and signs for manoeuvring. All procedures are mentioned in international inland navigation regulations.
CONTENT: General accepted definitions, the signalisation for day and night of the vessels, the signalisation of the waterway,.Spacial vizual and acustical signalizations. Signalization for regular and special convoy , pollution preventing rules for inland waterway. Other special rukles and conditions for navigation.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1.Regulamentul de navigatie pe Dunare in sectorul Romaniei editia 2007-OMT 787/2007.

2.Ghidul marinarilor,volII Comisia Dunarii 1976
3.Comentariile Comisiei Dunarii referitoare la navigatia pe Dunare 1973
4.CEVNI- editia 2003 modificata si actualizata.
5.RSB Fluvial
6 Regulamentul de navigatie pe Canal Dunare Marea Neagra

Subject of study:
Ship handling, salvage and first aid

CODE: D24NTMFL877
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 4nd year/2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The course offers the students theoretical and practical concepts about the main nautical qualities of the ship, knowledge about how the vessel is manoeuvred in different conditions.
CONTENT: Nautical and manouvring qualities of the ship. The efects of the rudder and propulsion, and different combination of these.Factors which determinate specific movement of the vessel(flow, wind,power of the propulsion,surface of the rudder).The manouvre of one propeller vessel or two propellers, drop and heave the anchor manouvre, turning manouvre,come alongside and clearence manouvre.First aid and fire fighting activities.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1.Bonţideanu P.-Navigaţia şi manevra navelor pe apele interioare, Ed.Tehnică, Buc. 1973
2.Balaban Gh.-Conducerea navei, Ed. Tehnică, Bucureşti, 1963
3.Dragu L.-Manevrarea ambarcaţiunilor şi navelor, E.D.P Bucureşti, 1981
4.Deboveanu Marin -Tratat de Manevra Navei Ed II –Lumina Lex.

Subject of study:
Use of radar on international waterways

CODE: D24NTMFL771
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 4st year/1nd semester
TYPE OF COURSE: specialized
OBJECTIVES: Knowledge, understanding, explanation and interpretation of the theoretical foundations and methods of using the radar installation.
CONTENT: Radar equipment used in maritime and river navigation. Block diagram and radar operation. Recommendations on the main technical and operational parameters of radar installations used in Danube navigation. Provisions relating to the installation and control of the operation of Radar Installations. Danube Commission 1995. Identification of external factors of radar equipment that affect radar detection. Identifying and presenting factors that can cause misconception of the radar image. Interpretation of radar images. Formation of echoes. Suppression of parasitic echoes. Reflective properties of targets. Establishment of helpdesks for radar navigation and safe navigation. Radar detectors and beacons. Recommendations on optimal types of radar reflectors and how to install them on the Danube. The Danube Commission 1995.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective): 1. Bozianu, F., Aparate electrice de navigatie. Volumul I . Aparate pentru conducerea navei. Iasi : Editura Gh. Asachi, 2002. 2.Bozianu, F Sisteme radioelectronice de navigatie. Note de curs, 1995. 3. Bârsan E., Navigaţie Radar şi Radar Plotting – Editura ExPonto 2000. 4. Călueanu D. Instalaţii electrice la bordul navelor, Ed. Tehnică, Bucureşti 1981. 5. Băluţ I. Călueanu D. Tehnici de urmărire radar, Ed.Leda, Constanţa 1996

Subject of study:
Ship communications equipment's

CODE: D24NTMFL767
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 4st year/1nd semester
TYPE OF COURSE: specialized
OBJECTIVES: Knowledge of the processes and phenomena that occur in the functioning of the ship communication equipment, the development of knowledge in the field. Identifying and explaining the constructional and functional particularities of each on-board communication equipment.
CONTENT: Development of radiocommunications. Short history. Fundamental notions of radio waves. Propagation of radio waves. Global maritime distress and safety system (GMDSS). Configuring the GMDSS system. Elementary knowledge about frequencies and frequency bands. Frequencies used in maritime communications. Basic knowledge of satellite communications. Communication and traffic surveillance (VTS) systems and equipment in inland navigation. Presentation of the RIS system. The components of the RORIS system (or VTMIS on the Danube). Automatic identification system - AIS. Coupling the system with other navigation equipment on board ships. Radiotelephone communication systems. Radiocommunications Regulation of the International Telecommunication Union (ITU). International radiotelephone service on VHF and UHF covering inland waterways. Types of communications: ship-to-shore radiocommunications, ship radiocommunications, radiocommunications within a convoy.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective): 1. Bozianu, F., Bozianu, V. Tratat de echipamente de navigatie.Vol. I,II. Constanta:Editura Ex Ponto, 2007. 2. Bădără, N., Solcanu, V., G.M.D.S.S. - Note de curs – Constanţa, 2007. 3. Dubovan L., Dubovan S., Olei A., Echipamente de comunicatie, note de curs, Dr.Tr.Severin, 2015. 4. Codruţa Pricop, GMDSS – GOC Tehnici de Instruire, (GMDSS GOC Training Techniques) Editura NAUTICA, Constanţa. 5. Popa, Ionel Instalatii și sisteme auxiliare de bord. Editura Academiei Navale`Mircea cel Batran` , Constanta, 2004. 6.Popa Dan,Tehnici și Echipamente GMDSS, Editura NAUTICA, Constanţa, 2009

Subject of study:
River navigation

CODE: D24NTMFL885
NUMBER OF CREDITS: 2
YEAR/SEMESTER: 4st year/2nd semester
TYPE OF COURSE: Specialized
OBJECTIVES: Knowledge and understanding of the phenomena that influence navigation on inland waterways and factors that influence the ability to navigate safely. Understanding the theoretical background of ship and convoy behavior during navigation.
CONTENT: Navigation on the Romanian Danube sector. General principles for river navigation. Information Documents for Danube Navigation. Day and night sailing. Optimization of navigation conditions, RIS standards.
TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective): 1. Comisia Dunării-Carte de Pilotage du Danube vol.I-IX ediţiile 1954-1994. 2. Comisia Dunării -Annuaire hydrologique – ediţiile 1990-1999. 3. Comisia Dunării 1964-Reguli de supraveghere fluvială aplicabile pe Dunăre. 4. Comisia Dunării 1958-Dispoziţii fundamentale referitoare la navigaţia pe Dunăre. 5. Comisia Dunării 1973-Albumul curbelor Dunării. 6. Consiliul Europei -Directiva Europeană 2005/44/*EC* (Directiva RIS*).*

Subject of study:
International maritime law

CODE: D24NTMFL768
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 4st year/1nd semester
TYPE OF COURSE: domain
OBJECTIVES: Knowledge, understanding, explanation and interpretation: the legal regime of Romania's waterways; general notions of labor law, normative acts specific to labor law; maritime and river courts; the legal aspects of shipping, the registration and deletion of ships, the documents of the ship, the transcription of the constitution, modification and extinction of real rights over the vessel, the rights and obligations of the seafarers, their documents and their professional attestation.
CONTENT: General notions of law. General notions of constitutional and administrative law. General notions of labor law. River and Maritime Law. The sailing staff. Marine and river basins.
TEACHING LANGUAGE: Romanian
EVALUATION: Written examination
BIBLIOGRAPHY (selective): 1. Codul civil. 2. Codul muncii. 3. Constitutia Romaniei. 4. Codul penal. 5. Adfrian Cristea, Drept maritim. 6. Maria Verotti, Masurile asiguratorii in dreptul maritime.