Field of Study: Industrial Engineering and Management
Programme of studies: Management of Logistics Systems

First year of study:

Subject of study:
Management of Logistical Systems

CODE: D24MSLL101
NUMBER OF CREDITS: 6
YEAR/SEMESTER: 1st year/1st semester
TYPE OF COURSE: specialty
OBJECTIVES: The course offers the students theoretical concepts concerning the governance of the logistic activity, operational and strategic planning of logistics, existent logistic systems, connection of logistics with other sectors in an organization
CONTENT: Logistics management, principles and functions of the logistic management, logistic information system, connection of logistics with other sectors, transport, storage of merchandise, trend of the logistic activities.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):

Kotler, P., - Managementul Marketingului. Traducere în limba română. Ed. Teora Bucureşti, 1997

Bălan, Carmen, Logistica, Editura Uranus, Bucureşti, 2001.

Gattorna, L. John, Managementul logisticii şi distribuţiei, Editura Teora, Bucureşti, 1999

Cristopher, M., -Logistics and Supply Chain Management. Pitman Publishing London. 1992

Douglas, L., Stock, J., - Strategic Logistics Management, 3th ed. Homewood, Boston, 1992

Ilieş, L., - Logistica întreprinderii. Ed. Risoprint, Cluj-Napoca, 1999

Gavrila, T., Lefter, V. – Managementul general al firmei, Editura Economica, Bucuresti, 2004

Subject of study:
Industrial Logistics

CODE: D24MSLL102
NUMBER OF CREDITS: 4
YEAR/SEMESTER: 1st year / 1st semester
TYPE OF COURSE: Speciality
OBJECTIVES: Dissemination of information regarding the configuration of the logistic chain for industry and distribution and the factors that influence the logistic chain is the main objective.
CONTENT:
Importance of logistics in economic entities
Storage
Acquisition
Introduction in industrial logistics
Planning the commercial logistics of companies
Logistics heading the production
Logistics of distribution
Informational system of logistics activity
Logistics and marketing
Logistical services
TEACHING LANGUAGE: Romanian
EVALUATION: Elaboration of projects and Written examination
BIBLIOGRAPHY (selective):

Gattorna J. – Managementul logisticii si distributiei, Ed. Teora, Bucuresti, 2002

Heskett J., Shapiro R.- Logistics strategy: cases and concepts, West Publishing, St Paul, 1985

Joffre P., Koenig G. - Gestion stratégique. L´entreprise, ses partenaires-adversaires et leur univers, Litec, Paris, 1992

Kolb F. - La logistique: approvisionnement, production, distribution, Entreprise moderne d´Edition, Paris, 1972

Korda Ph. - Vendre et défendre ses marges, Dunod, Paris, 1994

Lacrampe S., Macquin A. – La logistique commerciale, Ed. D'Organisation, Paris, 1989

Martin A.- Distribution Resource Planning, DRP, le moteur de l'ECR, Jounenne et Associés, 1996

Myer R. - Suppliers: manage your customers, Harvard Business Review, 1989

Napolitano G., Lapeyre J. - La certification des services, Ed. d´Organisation, Paris, 1994

Nelson R., Winter G. - An Evolutionary Theory of Economic Change, Harvard University Press, Boston, 1982

Kotler, P., - Managementul Marketingului. Traducere în limba română. Ed. Teora Bucureşti, 1997

Bălan, Carmen, Logistica, Editura Uranus, Bucureşti, 2001.

Gattorna, L. John, Managementul logisticii şi distribuţiei, Editura Teora, Bucureşti, 1999

Cristopher, M., -Logistics and Supply Chain Management. Pitman Publishing London. 1992

Douglas, L., Stock, J., - Strategic Logistics Management, 3th ed. Homewood, Boston, 1992

Ilieş, L., - Logistica întreprinderii. Ed. Risoprint, Cluj-Napoca, 1999

Subject of study: Total Quality Management

CODE: D24MSLL209
NUMBER OF CREDITS: 6
YEAR/SEMESTER: First year/2nd semester
TYPE OF COURSE: thorough discipline
OBJECTIVES: learning key requirements, principles, methods and techniques related to quality assurance. Implementation of total quality management in the company. Possibilities of implementing an integrated management environment.
CONTENT: The concept of quality. Evolution of quality management. Total Quality Management: philosophy and concepts. Basic concepts of total quality management. TQM principles. Implementing TQM in the organization. Human Resources in TQM. Structures and management strategies for implementing TQM. Quantification of TQM criteria. National and international standardization in the field of TQM..
TEACHING LANGUAGE: Romanian
EVALUATION: Written examination

BIBLIOGRAPHY (selective):

Rusu, B., Managementul calităţii totale în firmele mici şi mijlocii. Bucureşti: Economică, 2001.
Ilies, L., Managementul calităţii totale. Cluj-Napoca: Dacia, 2003.
Pruteanu, O., Bohasienici C., Iordachescu, D., Ghita, E., Machado, C.V.A., Managementul calităţii totale. Iaşi: Junimea, 1998.
Ross, J.E., Total quality management. London: Kogan Page Limited, 1994.
Bacivarov, I., Balme, L., Quality Efforts in Europe, Special Issue of the International journal "Quality Engineering, vol.8, no.4 (1995/96).
Ntonescu, V., Constantinescu, D., Managementul calităţii totale, Ed. OID. ICM , 1993

Subject of study: Computational measurement systems

CODE: D24IMCL208
NUMBER OF CREDITS: 8
YEAR/SEMESTER: IMC I/2nd semester
TYPE OF COURSE: speciality
OBJECTIVES: The objectives of the course consist in providing the speciality information in the field of the computatinal measurement systems.
CONTENT: Electrical and non-electrical measurement. Measurement principles.
Issues regarding electronic measurement in industrial processes. Sensors: sensors types, sensor liniarization. Traductors: types, liniarization. Technical and functional characteristics of the computational measurement systems. Choosing criteria of the computational measurement for industrial process monitoring. Signals emitted by the sensors systems. Capturing the electrical/non-electrical signals. Conversion of the electrical/non-electrical signals in unified signals. Unified signals and digital conversions. Serial port and communication protocol. Software apps for measured signals. Virual platforms for computational measurement tools. Software design principles and virtual tools development.
TEACHING LANGUAGE: Romanian
EVALUATION: Oral
BIBLIOGRAPHY (selective):

Savu S. – Nanostructured sensors for laser-arc hybrid systems – Politehnica Publishing House, Timisoara, 2008
Alimpie I. – Electrical measurements of the non-electrical parameters, Editura de Vest, Timisoara 1996
Savu, Sorin – Course Notes

Subject of study: The bases of research I

CODE: D24MMEDL105
NUMBER OF CREDITS:4
YEAR/SEMESTER: 1st year / 1st semester
TYPE OF COURSE: complementary
OBJECTIVES: Application of the principles of interdisciplinarity and transdisciplinarity in the integration of scientific, technical and socio-economic information in the directions of fundamental scientific research, applied scientific research and technological development. Correct use of quantitative and qualitative research methods
- acquiring analytical and integrative skills in defining and solving problems
CONTENT: Types of research activities. Methodology of research. Running the research. Formulation of the problem to be researched. Hypotheses. Running the research. Data collection. Methods of processing experimental data. Similarities and differences between research and development activities and industrial activities
TEACHING LANGUAGE: Romanian
EVALUATION: verification
BIBLIOGRAPHY (selective):

1. Gingu, O., Bazele cercetării, Supot de curs
2. Enăchescu, C., Tratat de teoria cercetării ştiinţifice, Editura Polirom, Iaşi, 2005
3. Manolea, Gh., Bazele cercetării creative, Editura AGIR, Bucureşti, 2006
4. Teseleanu, G., Metodologia cercetării ştiinţifice, Editura Universitas, Petroşani, 2007

Subject of study: The bases of research II

CODE: D24MMEDL206
NUMBER OF CREDITS: 3
YEAR/SEMESTER: 1nd year/2nd semester
TYPE OF COURSE: mandatory
CONTENT: Application of the principles of interdisciplinarity and transdisciplinarity in the integration of scientific, technical and socio-economic information in the directions of fundamental scientific research, applied scientific research and technological development
CONTENT: The concept of innovation. Categories of innovation activities. Conceiving, drafting and anti-plagiarism protection of the results of scientific research presented in a scientific paper. Conceiving, writing and presenting the results of the scientific research presented in a dissertation. Conceiving, writing and presenting the results of scientific research presented in a doctoral thesis. National and international research funding at doctoral level. Post-doctoral research carried out through scholarships with national and international funding
TEACHING LANGUAGE: Romanian
EVALUATION: verification
BIBLIOGRAPHY (selective):

1. Gingu, O., Bazele cercetării, Supot de curs
2. Chelcea S., Metodologia elaborării unei lucrări ştiinţifice, Ed. Comunicare.ro, Bucureşti, 2003
3. Enăchescu, C., Tratat de teoria cercetării ştiinţifice, Editura Polirom, Iaşi, 2005
4. Manolea, Gh., Bazele cercetării creative, Editura AGIR, Bucureşti, 2006
5. Teseleanu, G., Metodologia cercetării ştiinţifice, Editura Universitas, Petroşani, 2007

Subject of study: Optimizing Material Selection

CODE: D24MMEDL312
NUMBER OF CREDITS:7
YEAR/SEMESTER: 1st year/1st semester
TYPE OF COURSE: of deepening (A)
OBJECTIVES: Training and improvement of engineering and management specialists, namely the development of documentation, design,

research, investigation to balance consumption and cost

CONTENT: Metallic materials. Symbolization of metallic materials. Metallic material properties. General considerations on the selection of metallic materials - methods of selection of metallic materials - the steps of selecting a material for the manufacture of the parts. Multi-Criteria Selection of Materials. Design stages in material choice. Formulation of optimization problems. Classification of optimization issues. Matrix differential calculus elements. Conditions of optimality. Conditions of Extreme. Ecoselecting and ecodesign of products. Ecodesign of products. Optimal design in mechanical engineering

TEACHING LANGUAGE: Romanian

EVALUATION: Verification during the semester

BIBLIOGRAPHY (selective):

1. Mitelea Ion – Selectia materialelor în ingineria mecanică, Ed. Politehnica 2008
2. Demian mihai – Optimizarea alegerii materialelor – curs pentru uzul studenţilor
3. Demian mihai – Alegerea si utilizarea materialelor – îndrumar de proiectare
4. Crăciunescu M. C.- Materiale composite. Ed. Sedona, Timisoara 1998
5. Alexandru Domsa Serban Domsa, Materiale Metalice In Constructia De Masini Si Instalatii Ed. Dacia

Subject of study:
Evaluation of conformity of products

CODE:

NUMBER OF CREDITS: 6

YEAR/SEMESTER: 1st year/2nd semester

TYPE OF COURSE: domain

OBJECTIVES: Knowledge, understanding of concepts, theories and basic methods in the field of quality, the development of communication skills and the formation of a creative attitude.

Developing the skills to apply the accumulated knowledge on the quality of products and services by applying the quality standards.

Developing skills and attitudes to act independently in the context of analyzing advanced ideas and applications as well as being able to propose improvements and to estimate their implications

Developing managerial, communication skills, professional ethics and field-specific legislation.

Responsible execution of professional tasks. Team work ability.

CONTENT: 1. Conformity and conformity assessment.

Definitions; International context (market modernization, European single market). WTO-TBT Treaty; Single European market, free movement of products, regulated fields; Harmonization Directives.

2. Conformity assessment bodies.

Types of organisms and definitions; CABs involved in product conformity assessment; Certification bodies; Quality management system certification bodies; Test laboratories.

Calibration laboratories; Inspection bodies; CABs involved in the conformity assessment of products in the regulated areas. Notified Bodies.

3. Evidence of conformity :.

Supplier's Declaration of Conformity; Testing / Analysis Reports.

Inspection reports; Brands, labels; CE Marking.

4.Certification of products.

References for use in product certification; Certification systems. Components and features cf ISO / IEC Guide 67; Modules A H1;

Certification of organic products; Certification marks; CE Marking.

5. Specific standards for conformity assessment bodies. Presentation.

Presentation: SR EN ISO / CEI 17025; SR EN ISO / CEI 17020; SR EN ISO / CEI 17021; SR EN 45011

6. The stages of the product certification process.

Initiating certification Selection; determination; Analysis and attestation; Supervision.

7. Accreditation of conformity assessment bodies.

Definitions; International and national context; International organizations (ILAC, IAF), European (EA) and national accreditation. Mutual Recognition Agreements: ILAC-MRA; IAF-MLA; EA-MLA RENAR - the accreditation body in Romania; Legislative framework: EC Regulation no. 765/2008; OG 23/2009

LANGUAGE: Romanian

EVALUATION: Written/oral examination

BIBLIOGRAPHY (selective):

1.Abrudan I., ş. a. – Manual de inginerie economică – Ed. Dacia, Cluj – Napoca, 2002;
2.Constantinescu, D., Nistorescu, T., Tumbăr, C. – Economia întreprinderii, Ed. Siteh, Craiova, 2006;
3.Milea, C. – Managementul calităţii totale, Ed. Universitaria, Craiova, 2006
4.Olaru, M. – Managementul calităţii, Ed. Economică, Bucureşti, 1999;
5.Olaru, M., ş.a. -Tehnici şi instrumente utilizate în managementul calităţii, Ed. Economică, Bucureşti, 2000.
6. *** Colecţia de standarde ISO 9000;

Subject of study:
Integrated material management systems

CODE: D24MSLL207

NUMBER OF CREDITS: 6

YEAR/SEMESTER: 1st year/2nd semester

TYPE OF COURSE: S

OBJECTIVES: Training and improvement of engineering and management specialists, namely development of documentation, design, research, investigation to balance management, consumption and cost

- Appropriate use of the theoretical notions of the discipline of information systems for materials management
- Use of European Union content standards - EURONORM-
- Interpretation of the theoretical and practical content of the subject
- Employing working methods on material management

CONTENT: 1. Computerized production systems: necessities, role, evolution. Integrated management systems. Main features. Advantages of implementing an integrated management system.

2 Software tools for integrating information into a single platform - ERP systems. Elements of an ERP system. Components and features
3. Methods of analysis and optimization of distribution / supply networks. Problem of localization and sizing. Using graph theory elements in optimization issues.
4. Flows in transport networks. The Ford Fulkerson algorithm. Optimal roads in a graph. The Dijkstra algorithm, Bellman-Kalaba.
5. Resource Planning Method (MRP). The Just In Time (JIT) method.
6. Organization-assisted organization of materials and manufacturing accessories. Automatic identification by bar codes. Control and inventory in materials management. Inventory policies.
7. Elements of stock theory. Factors of influence. Deterministic patterns of stock management. Random demand inventory.
Predictive methods. Analysis of time-dependent series
LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
F.GH. Filip, Decizie asiatata de calculator, Ed. Tehnica Bucuresti , 2002.
F.GH. Filip Sisteme suport pentru decizii, Ed. Tehnica Bucuresti , 2004.
V. Masgras, Cercetari operationale, Ed. Fair Partners, 2004
Gianpaolo Ghiani, Introduction to Logistics Systems Planning and Control, Wiley, 2004
L.Melnic, etc., Cercetari operationale. Fundamentarea deciziilor in managementul sistemelor de productie, 2004
J.R. Tony Arnold, Stephen Chapman, Introduction to Materials Management, Prentice Hall, 2003
T. Vollmann, etc. Manufacturing Planning and Control Systems for Supply Chain Management, McGraw Hill, 2005
Predoi, M., Capitole de matematici aplicate-Optimizarea sistemelor-Ed. Universitaria, Craiova, 1999.
Purcaru, I., Matematici generale si elemente de oprtimizare-Teorie si Aplicatii, Ed. Economica, 2004
Zaharie, D., etc. Sisteme informatice pentru asistarea deciziaie, Ed. Dual Tech, 2006.
Demian Mihai, Note de curs.

Second year of study:

Subject of study: Transport and storage of special substances

CODE: D24MSLL311
NUMBER OF CREDITS: 8
YEAR/SEMESTER: 2nd year/1nd semester
TYPE OF COURSE: study
OBJECTIVES: The course is designed to help students deepen their knowledge on the complex activity of transport to special segment particularly problematic in the context of globalization of trade and the promotion of the principle of free movement of goods.
CONTENT: Systems of transports .The modal and intermodal transports. The special goods. Special deposits for goods. Loading / unloading and stacking special chemicals. Standardized means for transportation of special loads. Conventions, international and national rules and regulations on the transport of specific substances. Special units specialized transportation. Documents accompanying the shipment and special merchandise. Specific rules for transit . Rules for the prevention and protection of human life and material goods against pollution.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Georgescu, C.; Nicolau, S, Tehnologii moderne de transport, Editura tehnica, Bucuresti, 1975
CERONAV, Manipularea si transportul marfurilor periculoase, Ed. Scorpion, Galati, 2003.
Hangiac, R., Dinescu, I., Georgescu, C., Transportul paletizat şi containerizat al mărfurilor, Editura Tehnică, Bucureşti, 1975
Hangiac, R., Manipularea, depozitarea, transportul şi distribuirea mărfurilor, Editura tehnică, Bucureşti, 1973
Munteanu, Doina. Popa, Dan Stelian. Guita, Corina Irina Manipularea si transportul marfurilor periculoase. Galati : Editura Scorpion, 2003,
Alexa, C., Transporturi şi expediţii internaţionale, Editura ALL, Bucureşti, 1995

Subject of study: Intelligent transport systems and transport flow optimization

CODE: D24MSLL312
NUMBER OF CREDITS: 8
YEAR/SEMESTER: 2nd year/1st semester
TYPE OF COURSE: fundamental
OBJECTIVES: The course offers the students basic concepts of the intelligent transportation systems, a knowledge of the intelligent transport systems architecture and the traffic control algorithms, as well as the advanced technologies.
CONTENT: Concepts of the intelligent transportation systems. Intelligent transport systems architecture. Functions of intelligent transportation system components. Control algorithms used in intelligent transport systems. Technologies used in developing of intelligent transport systems. Advanced Traffic Management System. Advanced Traveler Information Systems.
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
Banciu D., Rodica Hrin R., Mihai G., Anghel L., David A. – Inteligenta în transporturi, Ed. Capitel, 2005.
Banciu D. si colaboratorii – Sisteme inteligente de transport, Ed. Tehnica, 2003.
Nemţanu F.C., Minea M. and others – Inteligent Transport Systems Handbook, Ed. Triumf, Bucureşti, 2002.

Mashrur A. Chowdhury, Adel Wadid Sadek - Fundamentals of Intelligent Transportation Systems Planning, Published by Artech House, 2003.
McQueen B., McQueen J. - Intelligent Transportation Systems Architectures, Published by Artech House, 1999.
Sussman, J,. Perspectives on Intelligent Transportation Systems (ITS). New York Springer, 2010.

Subject of study: Maintenance of the Logistic Systems

CODE: D24MSLL313
NUMBER OF CREDITS: 6
YEAR/SEMESTER: 2nd/1st semesters
TYPE OF COURSE: speciality
OBJECTIVES: Course objectives are to create the basis knowledge about the maintenance and reliability of the technical systems. Also, knowledge about the management techniques of the maintenance activity are presented.
CONTENT: Maintenance. Definition. Classification. Reliability systems. Mathematical approach of reliability. Failure of the technical systems. Total Productive Maintenance. Management methods of the maintenance activity. Modern methods for maintenance: Thermography; Vibration diagnosis of the technical systems.
EVALUATION: Written examination
BIBLIOGRAPHY (selective):
Teodorescu N., Mentenanţă generală în domeniul ingineriei mecanice, Ed. AGIR, Bucureşti, 2008
Burlacu, G., ş.a, Fiabilitatea, mentenabilitatea şi disponibilitatea sistemelor tehnice, Ed. Matrix Rom, Bucureşti, 2005
Deac Vasile, Managementul mentenanţei industriale, Ed. Eficient, Bucureşti, 2000
Verzea Ion; Gabriel Marc; Richet Daniel, Managementul activitatii de mentenanta, Ed. Polirom, Bucureşti, 1999
Militaru Ctin, Fiabilitatea şi precizia în tehnologia construcţiilor de maşini, Ed. Tehnică, Bucureşti, 1987.
Berinde, M., Mentenanţa productivă totală, Noul sistem japonez de întreţinere şi reparaţii a echipamentului industrial, Oficiul de informarea documentară pentru industria construcţiilor de maşini, , IDCM-O, nr. 4/1998.
Burlacu, G., ş.a, Fiabilitatea, mentenabilitatea şi disponibilitatea sistemelor tehnice, Editura Matrix Rom, Bucureşti, 2005.
Asavinei, I., Niculescu, C., Măsurarea temperaturilor înalte. Metode pirometrice, Editura Tehnică, Bucureşti, 1989.
Ciolacu, F.G., Craciunoiu, N., Rosca, S.A., Principii de măsurare, Editura Universitaria, Craiova, 2002.
Ciolacu, F.G., Rosca A.S., Termometrie electrică şi pirometrică, Editura Sitech, Craiova, 2007.
Rosca, A.S., Modelarea surselor termice din procesele de aşchiere, Editura Universitaria, Craiova, 2002

Subject of study:
Audit and certification of management systems

CODE: D24MSLL314
NUMBER OF CREDITS: 6
YEAR/SEMESTER: 2nd year/1st semester
TYPE OF COURSE: mandatory
OBJECTIVES: Knowledge, understanding of basic concepts, theories and methods in the field of auditing and certification of management systems, development of communication skills and creative attitude.
Developing the skills to apply in practice the accumulated knowledge of the audit and certification of management systems according to the quality standards.
Developing skills and attitudes to act independently in the context of analyzing advanced ideas and applications as well as being able to propose improvements and to be able to predict their implications.
Developing managerial, communication skills, professional ethics and field-specific legislation.
Responsible execution of professional tasks. Team work ability..
CONTENT: standard presentation iso 9001: 2008, Definition, importance and functions of iso 9000 standards
Process approach, Compatibility with other management systems. Application
The principles of quality management systems Iso 9001/2000 requirements, Documentation requirements
standard presentation iso 19011: 2002, "guide for auditing quality and / or environmental systems"
Auditing / audit processing principles, audit program management, Objectives and content of the audit program
Responsibilities, resources and procedures for the audit program, Implementation of the audit program
Audit activities, Initiating the audit, Performing document analysis, Preparation for on-site audit activities
Performing on-site audit activities, Preparation, approval and dissemination of the audit report
Concluding the audit. Performing follow-up audit, Competence and evaluation of auditors 10.1. Personal qualities
Knowledge and skills, Education, work experience, auditor training and audit experience
Maintaining and improving competence. Auditor's assessment
TEACHING LANGUAGE: Romanian
EVALUATION: Written/oral examination
BIBLIOGRAPHY (selective):
1. Bernard Froman, *Manualul Calităţii.. Instrument strategic al abordării calităţii*, Editura Tehnică, Bucureşti, 1998,
2. A. Hinescu, Gh. Oneţiu, I.S.Mihon, *Managementul Calităţii*, Editura Aeternitas, Alba Iulia ,2003
3. Juran. *Supremaţia prin calitate. Manualul directorului de firm*ă, Editura Teora, Bucureşti, 2002
4. M. Olaru, Al. Isaic-Maniu, V. Lefter, N. Al. Pop, S. Popescu, N. Drăgulănescu, L. Roncea, C. Roncea, *Tehnici de instrumente utilizate în managementul calităţii*, Editura Economică, Bucureşti, 2000,
5. SR EN ISO 9000:2006: Sisteme de management al calitatii. Principii fundamentale si vocabular. 6. SR EN ISO 9001:2001: Sisteme de management al calitatii. Cerinte.

7. SR EN ISO 9004:2001: Sisteme de management al calitatii. Linii directoare pentru imbunatatirea performantelor.
8. SR EN ISO 19011:2003: Ghid pentru auditarea sistemelor de management al calitatii si/sau de mediu.