

COURSE DESCRIPTION

Name of the course: Economy of the Auto transport Enterprise	Code: MpMAT01	Semester: 1
Type of teaching: Lectures, Seminar exercises	Lessons per week: L – 2, SE– 1	Number of credits: 4

LECTURERS: Assoc.prof.Toni Bogdanova Mihova, Ph.D. tel.: 659 714, email: mihova@tu-plovdiv.bg, Sofia Technical University – Plovdiv Branch

Chief assistant professor Desislava Shatarova, PhD, tel. 659 716; e-mail: desislava@tu-plovdiv.bg., Sofia Technical University – Plovdiv Branch

COURSE STATUS IN THE CURRICULUM: Compulsory for specialty "Auto Transport Management" educational degree "Master".

AIMS AND OBJECTIVES OF THE COURSE: Deepening the learning and interpretation of basic economic categories and their manifestation, interconnection and management, so that students can analyze developments in auto transport undertakings management processes as a system.

COURSE DESCRIPTION: Main topics: Introduction to the economy of the auto transport enterprise; Business environment of the auto transport enterprise; Operation and management of the auto transport enterprise; Capital and assets; Material economy; Personnel (Human resources); Expenses and costs; Pricing, distribution and sales; Revenues of the auto transport enterprise; Efficiency of production and business; Investments and finance; Financial planning.

PREREQUISITES: Basic knowledge in mathematics, industrial law and economics.

TEACHING METHODS: Lectures and seminars supported by audio, video and multimedia equipment. Active teaching methods, constantly engaging the students, are used.

METHODS OF ASSESSMENT: Exam test format and solving practical tasks.

LANGUAGE OF TEACHING: Bulgarian

BIBLIOGRAPHY:

- 1.Ив.Георгиев, Н.Щерев, Д.Благоев, Икономика на предприятието, ИК- УНСС, ISBN 978619232015- 7, 2017
- 2.Ив.Георгиев, Г.Попов, Юл.Маринова, Икономика на предприятието, УНСС, ISBN 9789546440051, 2018 г.
- 3.Велев, Мл. и др. Икономика и конкурентноспособност на предприемаческата дейност, С. „Информа Интелект”, ООД, 2009 г.
- 4.Иванов И. и др. Икономика на предприятието, Варна, изд. на ИУ, 2000 г.
- 5.Дончев, Д., Велев Мл., Илиев И. Икономика на фирмата, С., „Мартилен”, 2002 г.
- 5.Търговски закон

COURSE DESCRIPTION

Course Title: Legislation for the management of motor transport enterprise	Code: MpMATO2	Semester: 1
Type of Teaching: Lectures, Laboratory exercises	Contact hours per week: L – 2, LE – 2	Number of credits: 6

LECTURERS: Associate Professor Eng. Ivan Shopov, PhD, tel. 0895587547, email: ivan_chopov@abv.bg, Sofia Technical University Plovdiv Branch

COURSE STATUS IN THE CURRICULUM: Compulsory course for full-time students, majoring in Management in motor transport at TU-Sofia, Plovdiv Branch, Master's degree.

COURSE OBJECTIVES: To familiarize students with the basic legislative documents and institutions regulating the activities in the field of international road transport. The knowledge of the regulatory framework will allow students in their future activities confidently and lawfully manage manufacturing processes related to international transport.

COURSE DESCRIPTION: Main topics: Road Transport Act, Laws on traffic and road - legal institutes concerning a motor-transport company, Ordinance for approval of transport schemes and provision of public transport buses, Ordinance on the conditions and procedures for carriage of passengers and goods for their own account, Ordinance on the movement of oversize and heavy vehicles, Regulation implementing the regulation on controls on the movement of road transport, Ordinance on mandatory use of devices to limit speed, Ordinance on the manner, scope and organization of checks on the road, Ordinance for periodic inspections of the roadworthiness of vehicles, Ordinance on the drivers from various categories, Ordinance on the terms and conditions of carrying dangerous goods, Ordinance for combined freight transport, Ordinance for the registration, control, putting in motion and stopping of motor vehicles and trailers.

PREREQUISITES: Basic knowledge of Management of a motor-transport enterprise, Logistics, Economics of a motor-transport enterprise, Automobile techniques

TEACHING METHODS: Lectures and laboratory exercises, aided by slides, texts of the regulative documents in force, case studies.

METHODS OF ASSESSMENT: Ongoing assessment with two tests.

LANGUAGE OF INSTRUCTION: Bulgarian

LITERATURE RECOMMENDED:

Николова, Хр., Транспорт и спедиция, УНСС, София, **2018,**

Петкова, А., Дурин, Ст., Пътеводител на транспортната фирма, РС издателство и Бизнес Консултации, **2018**

Райков, Райко. Георгиев, Николай. Стойков, Димитър. Беров, Теодор. Стоянов, Ивайло. Техническа експлоатация и безопасност на транспорта. София, ВТУ „Тодор Каблешков”, **2002,** Най-добрите бизнес модели в транспорта и логистиката, Бълг. трансп. преса, **2019**

Пенков, Иван. Основи на автомобилния транспорт. София, **1997.**

DESCRIPTION OF THE COURSE

Name of the course: Autotransport Machinery	Code: MpMAT03	Semestar: 1
Type of teaching: Lectures and laboratory work	Lessons: L – 30h, LW – 30h	Number of credits: 5

LECTURER: Prof. Eng. Valyo Nikolov, PhD, email: vnikolov@tu-plovdiv.bg
Assist. Prof. Stiliyana Taneva, PhD, email: s.taneva@tu-plovdiv.bg
Technical University of Sofia, Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Compulsory for specialty „Road Transport Management“ at the Faculty of Mechanical Engineering, master level of degree.

AIM AND OBJECTIVES OF THE COURSE: Aim of the course is to enlarge the knowledge of the students about the classification and operating characteristics of the autotransport machinery (car and truck), directly linked to its motion, engine power and torque on the driving wheels, interaction between wheels and road; traction performance, braking performance, handling, stability, cross-country ability and fuel effectiveness, constructions, design and construction of units, assemblies and systems of the cars and trucks.

DESCRIPTION OF THE COURSE: Basic topics: Classification of the cars and trucks. Operating characteristics. Transmission of engine power to the driving wheels of the automobile. Interaction between wheels and road. Driving resistances on the automobile. Methods for calculating dynamic verification; Conditions for maintaining stability and handling. Opportunities for operating in off-road conditions. Estimation of Fuel effectiveness of automobile. Influence of construction and operational factors on the dynamic properties of the automobile. Schemes of automobiles and their engines, systems, assemblies and units: engines; clutches; layshaft gearboxes; epicyclic gearboxes; automatic transmissions; transfer gearboxes; propeller shafts and universal joints; bevel gears; differentials; axle shafts and final drive; axles; wheels and tires; brake systems; steering systems; suspension; frame.

PREREQUISITES: Mathematics. Physics. Mechanics.

TEACHING METHODS: Lectures using multimedia, education boards and slides. Laboratory practise with reports produced by the students and checked by the assistant.

METHOD OF ASSESSMENT: Written exam.

INSTRUCTION LANGUAGE: Bulgarian.

BIBLIOGRAPHY: 1. Любенов С С., Б. Ангелов, Ив. Евтимов Автомобили и трактори. Експлоатационни свойства, Русе, 2004; 2. Семов Д., Н. Иванов, Д. Лозанов, Автомобили, трактори и кари, София, Техника, 1992; 3. Литвинов А. С., Я. Е. Фаробин. Автомобиль. Теория эксплуатационных свойств. Москва, „Машиностроение“, 1989. 4. Кацов Д. А., Димитров Й. Н. Колесни и верижни машини, ТУ-София, филиал Пловдив, 2005; 5. Морчев Е. П. Проектиране и конструиране на автотранспортната техника, София, „Техника“, 1991; 6. Лукин П. П. и др. Конструирование и расчет автомобиля, Москва, „Машиностроение“, 1984. 7. Heisler Heinz. Vehicle and engine technology, United Kingdom, ISBN 0-7131-3542-5, 1985. 8. Hillier V. Fundamentals of motor vehicle technology, Fourth edition, London, ISBN 0 7487 0531 7, 1991. 9. Meywerk M., Vehicle dynamics, John Wiley & Sons Ltd, ISBN: 9781118971352, 2015.

COURSE DESCRIPTION

Course Title: Management of a motor-transport enterprise	Code: MpMAT04	Semester: 1
Type of Teaching: Lectures, Laboratory exercises	Contact hours per week: L – 2, LE – 2	Number of credits: 5

LECTURERS: Assoc.prof.Toni Bogdanova Mihova, Ph.D. tel.: 659 714, email: mihova@tu-plovdiv.bg, Sofia Technical University – Plovdiv Branch

COURSE STATUS IN THE CURRICULUM: Compulsory course for full-time students, majoring in Management in motor transport at TU-Sofia, Plovdiv Branch, Master’s degree.

COURSE OBJECTIVES: Studying the basics and the modern state of the dynamic managerial processes so that the students are able to analyze the ongoing managerial processes in a motor-transport enterprise as a system.

COURSE DESCRIPTION: Main topics: Communication in management; Communication process; Managerial decisions; Management style; Management of conflicts; Basic management functions in a motor-transport enterprise: planning, organization, motivation and control.

PREREQUISITES: Basic knowledge of economics, human resources management, basics of management and humanities.

TEACHING METHODS: Lectures and laboratory exercises, aided by audio, video and multimedia techniques; active methods of teaching, permanently involving the students.

METHODS OF ASSESSMENT: The objectives of the course are achieved by the following methods of control and assessment: the final grade is formed out of three components - two tests with a weight of 0,15 per each of them, - a grade from the laboratory exercises with a weight 0,20 and - a written examination – 0,50.

LANGUAGE OF INSTRUCTION: Bulgarian

LITERATURE RECOMMENDED:

Basic readings

1. Харизанова, М., Миронова, Н., Основи на управлението, Авангард Прима, София, 2015
2. Иванов, Ив. Основи на мениджмънта, "Макрос", Пловдив, 2015
3. Бакалова Виолета, Николова Христина, Икономика на транспорта, УНСС, 2010
4. Ангелов, А., Основи на управлението, "Полина комерс", София, 2009
5. Савов, В., Основи на управлението, Университетско издателство "Стопанство", София, 1996
6. Христов, Ст., Бизнес мениджмънт, Университетско издателство "Стопанство", София, 1998
7. Армстронг, М., Преуспяващият мениджър, "Делфин-прес", Бургас, 1993
8. Донъли, Дж. Х., Гибсън Дж.Л., Иваничевич, Дж.М., Основи на мениджмънта, София, 1997
9. Дракър, П., Управление на организации с идеална цел: "Принципи и практика", Фондация "София", София, 1997

DESCRIPTION OF THE COURSE

Name of the Course: Modeling and optimization of road transport	Code: MpMAT05	Semester: 1
Type of teaching: Lectures, Laboratory work, Course project	Lessons per week: L-2 h, LW-2 h, CP-1 h	Number of credits: 5

LECTURERS:

Assoc. Prof. Silviya Chavdarova Salapateva PhD (FME), tel.:0893691913, email: sisisal@tu-plovdiv.bg , Technical University of Sofia, branch Plovdiv.

COURSE STATUS IN THE CURRICULUM:

Optional for the students speciality "Road Transport Management" at the Faculty of Mechanical Engineering of Technical University – Sofia, branch Plovdiv, master of degree.

AIMS AND OBJECTIVES OF THE COURSE:

The purpose of studying the discipline is formation of professional knowledge and gain practical skills in the adoption of effective managerial decisions in the selection and justification of rational methods for implementation of transport tasks in road transport.

DESCRIPTION OF THE COURSE:

The course includes topics: fundamentals of modeling study of random processes in transport, establishing statistical regularities modeling of transport systems and optimization of transport models to clarify the role, status and prospects of economic-mathematical methods in the organization of road transport in market conditions, taking into account labor, material, technical, operational and organizational constraints.

PREREQUISITES:

Basic knowledge of calculus and processing of statistical data.

TEACHING METHODS:

The resulting theoretical knowledge during lectures is consolidated through laboratory exercises. During the exercises solve problems and develop problems with specific data, some of them using standard software and should be held in the computer rooms.

METHOD OF ASSESMENT:

Two assessments at mid and end of semester.

INSTRUCTION LANGUAGE:

Bulgarian.

BIBLIOGRAPHY:

1. Качаунов Т.Т., „Моделиране и оптимизация на транспортните процеси“, ВТУ „Тодор Каблешков“, София, 2005.
2. Клямбарски Л., Съвременно състояние на научните изследвания в сферата на транспортното планиране и моделиране, ВТУ „Тодор Каблешков“, София, 2017.
3. Банина Н. В., Экономико-математическое моделирование транспортных процессов. Лабораторный практикум, Издательство ИрГУПС, Иркутск, 2017.
4. Витвицкий Е. Е., Моделирование транспортных процессов, Издательство СибАДИ, Омск 2017.
5. Симеонов Д., В. Пенчева., „Ръководство за упражнения по моделиране и оптимизация на транспортните процеси“, Печатна база при РУ "А. Кънчев", Русе, 2005.

COURSE DESCRIPTION

Name of the course: Road Transport Logistics	Code: MpMAT06	Semester: 1
Type of teaching: Lectures, Laboratory work	Lessons per week: L-2 h, LW-2 h	Number of credits: 5

LECTURERS:

Assoc. professor SilviyaSalapateva, PhD, tel.0893691913;e-mail: sisisal@tu-plovdiv.bg, Sofia Technical University – Plovdiv Branch

COURSE STATUS IN THE CURRICULUM:

Compulsory for specialty "Road Transport Management" educational degree "Master".

AIMS AND OBJECTIVES OF THE COURSE:

The goal of the course is to give students a solid understanding of the analytical tools available to reduce costs and improve service levels in road transport logistics systems.

COURSE DESCRIPTION:

Main topics: Introduction to the Logistics Systems; Designing the Logistics Networks; Inventory Management; Designing and Operating a Warehouses and Passenger Terminals; Flows in Road Freight and Passenger Transport; Planning and Managing Long-Haul Road Freight and Passenger Transport; Planning and Managing Short-Haul Road Freight and Urban Transport; Logistics and Environment.

PREREQUISITES:

Basic knowledge in mathematics, industrial law and economics.

TEACHING METHODS:

Lectures and laboratory exercises supported by audio, video and multimedia equipment. Active teaching methods, constantly engaging the students, are used.

METHODS OF ASSESSMENT:

Exam test format and solving practical tasks.

LANGUAGE OF TEACHING:

Bulgarian

BIBLIOGRAPHY:

1. Кузнецова М., „Транспортное обеспечение логистических систем“, Издательство „Инфра-Инженерия, Москва, 2019.
2. Неруш, Ю. М., С. В. Саркисов, Транспортная логистика: учебник для академического бакалавриата, Издательство „Юрайт“, Москва, 2019.
3. Кирова А., „Управление на транспорта в логистиката“, Издателство на УНСС, София, 2001.
4. „Най – добрите модели в транспорта и логистиката“, Добрите практики на водещи български фирми, Издател Българска транспортна преса, София, 2019.
5. Лукинский В. С., В. И. Бережной, Е. В. Бережная, Е. И. Зайцев, И. А. Цвиринько, „Логистика автомобильного транспорта“, Финансы и статистика, Москва, 2004.

COURSE CHARACTERISTICS

Course Title: Project Management	Code: MpMAT07	Semester: 2
Type of Teaching: Lecturers, Seminar exercises	Contact hours per week: L - 2 hour, L – 1 hour	Number of credits: 3

LECTURERS: Assoc.prof.Toni Bogdanova Mihova, Ph.D. tel.: 659 714, email: mihova@tu-plovdiv.bg, Sofia Technical University – Plovdiv Branch
; Georgi Georgiev tel. 0888 22 72 82, email: ekip_pd@abv.bg Technical University – Sofia, Plovdiv Branch

COURSE STATUS IN THE SYLLABUS: Compulsory for the full-time Industrial Electronics Master Degree students in the Faculty of Mechanical Engineering.

COURSE OBJECTIVES: Upon completion students will have basic knowledge of the Project Management processes and will acquire skills for identifying project ideas and turning them into project proposals within the area of motor transport business.

COURSE DESCRIPTION: The course is focused on identifying project ideas and turning them into project proposals. The main topics are: Definitions of Project management, Projects and types of projects; The project as an instrument for meeting organizational needs and attracting funding; Methods and techniques for project development; Project teambuilding; Main elements of the project cycle and the project proposal; Developing project activities and identifying necessary resources; Project budgeting; Project implementation and management; National and EU programmes supporting Bulgarian Motor Transport business within the period 2014-2020.

PREREQUISITES: none.

TEACHING METHOD: Lectures with slides and topic discussions; lab work including group case study discussions and an individual term assignment with a powerpoint presentation defence.

METHODS OF TESTING AND EVALUATION: Control test (50%) and term assignment defence (50%).

LANGUAGE OF INSTRUCTION: Bulgarian

LITERATURE RECOMMENDED:

1. Андреев, О., Мениджмънт на проекти, Софттрейд, 2006
2. Патиас, Й., Илиева, С., Управление на риска в проект, УИ „Св.Кл.Охридски” 2018
3. Матеева, М., Разработване и управление на проекти по програми на Европейския съюз, Евроконсулт 06, 2007;
4. Kemp, Sid Project management – made easy, 2006.
5. Апостолов, А., Основи на проекта, Projecta, София, 2004;
6. Сборник материали по Програма „Партньори за проекти” на Център по предприемачество към Технически университет – София, филиал Пловдив, 2005;
7. Наръчник „Управление на цикъла на проекта”, София, 2005;

COURSE DESCRIPTION

Name of the course: Road Transport Control Systems	Code: MpMAT08	Semester: 2
Type of teaching: Lectures, Laboratory exercises	Lessons per semester: L – 30, LE– 15	Number of credits: 3

LECTURERS: Assoc. professor Pepo Yordanov, PhD, tel. 659 514; e-mail: piyordanov@tu-plovdiv.bg., Sofia Technical University – Plovdiv Branch

COURSE STATUS IN THE CURRICULUM: Compulsory for specialty "Road Transport Management" educational degree "Master".

AIMS AND OBJECTIVES OF THE COURSE: The goal of the course is to give students a solid understanding of the intelligent road transport control systems to ensure efficient, clean, safe and reliable road transport.

COURSE DESCRIPTION: Main topics: Introduction to the Road Transport Intelligent Systems; Systems for Road Traffic Monitoring and Control; Systems for Urban Traffic Monitoring and Control; Systems for vehicle position Monitoring; In-vehicle Systems for driver and driving monitoring; Traffic Safety Systems; Emission Control Systems.

PREREQUISITES: Basic knowledge in mathematics, road vehicles, road transport logistics.

TEACHING METHODS: Lectures and laboratory exercises supported by audio, video and multimedia equipment. Active teaching methods, constantly engaging the students, are used.

METHODS OF ASSESSMENT: Exam test format and solving practical tasks.

LANGUAGE OF TEACHING: Bulgarian

BIBLIOGRAPHY:

1. Bishop R. Intelligent Vehicle Technology and Trends, Artech House Publishers, Norwood, US, 2005.
2. European Commission, Horizon 2020 Work Programme 2016-2017 Smart green and integrated transport, 2016.
3. Жанказиев С. В. Интеллектуальные транспортные системы, МАДИ, Москва, 2016.
4. Петров В. В. Автоматизированные системы управления дорожным движением в городах, СибАДИ, Омск, 2007.

DESCRIPTION OF THE COURSE

Name of the Course: Transport of dangerous and specific goods	Code: MpMAT09	Semester: 2
Type of teaching: Lectures, Laboratory work	Lessons per week: L-2 h, LW-1 h	Number of credits: 3

LECTURERS:

Assoc. Prof. Ph.D. Silviya Chavdarova Salapateva (FME), tel.:0893691913,
email: sisisal@tu-plovdiv.bg , Technical University of Sofia, branch Plovdiv.

COURSE STATUS IN THE CURRICULUM:

Optional for the students speciality "Road Transport Management" at the Faculty of Mechanical Engineering of Technical University – Sofia, branch Plovdiv, master of degree.

AIMS AND OBJECTIVES OF THE COURSE:

To obtain knowledge relating to the carriage of hazardous and specific cargo. Getting to know the basic provisions for traffic road and road network, protecting the environment and ensuring safety of participants required documents for transport and introducing provisions for loading and storage of dangerous goods.

DESCRIPTION OF THE COURSE:

The course includes topics on: characterization and classification of hazardous and specific cargo; purpose and application of the ADR and our legislation; duties, responsibilities, sanctions; hazardous properties of substances, classes and hazard signs; Packaging - Requirements, joint transport of various dangerous goods; vehicles - requirements and signaling equipment; documentation in transportation; rules for loading, unloading and transportation; emergency actions.

PREREQUISITES:

Knowledge in the field of technology and organization of road transport rolling stock, loading - unloading machines.

TEACHING METHODS:

The resulting theoretical knowledge during lectures is consolidated through discussions, case studies and practical exercises.

METHOD OF ASSESMENT:

Two assessments at mid and end of semester.

INSTRUCTION LANGUAGE:

Bulgarian.

BIBLIOGRAPHY:

1. Превоз на опасни товари по шосе ADR (основен курс), Издателство „Зебра“, София, 2019. 2. Превоз на опасни товари по шосе ADR (основни изменение и допълнения, писмени инструкции), Издателство „Зебра“, София, 2019. 3. Борисов Ч., „Професионална компетентност при превози на опасни товари съгласно ADR“, издателство „Труд“, София, 2005. 4. Троицкая. Н. А, М. В. Шилимов, „Организация перевозок специфических видов грузов“, Издательство Кнорус, Москва, 2019. 5. Троицкая. Н. А, М. В. Шилимов, „Транспортно-технологические схемы перевозок отдельных видов грузов“, Издательство Кнорус, Москва, 2016.

COURSE DESCRIPTION

Course Title: Marketing in motor transport	Code: MpMAT10.1	Semester: 2
Type of Teaching: Lectures, Seminar exercises	Contact hours per week: L – 2, SE – 1	Number of credits: 3

LECTURERS:

Assoc.prof.Toni Bogdanova Mihova, Ph.D. tel.: 659 714, email: mihova@tu-plovdiv.bg, Sofia Technical University – Plovdiv Branch

Head assistant Elena Zlatanova, Ph.D., e-mail: elyzlatanova@abv.bg

COURSE STATUS IN THE CURRICULUM: Optional course for full-time students, majoring in Management in motor transport at TU-Sofia, Plovdiv Branch, Master's degree.

COURSE OBJECTIVES: To give the students knowledge of the theoretical, organizational, managerial and practical aspects in managing the marketing process in motor transport.

COURSE DESCRIPTION: Main topics: Management of the marketing process in motor transport; Concept of marketing; Market segmentation; Marketing strategy of a transport enterprise; Marketing information system; Product policy; Marketing and innovations; Pricing policy; Distribution and logistics; Work with customers; Internet marketing; E-commerce; Marketing and quality.

PREREQUISITES: Basic knowledge of economics; knowledge of the basics of management, marketing and management in marketing.

TEACHING METHODS: Lectures and seminar exercises, aided by multimedia techniques; active methods of teaching, involving the students.

METHODS OF ASSESSMENT: Ongoing assessment.

LANGUAGE OF INSTRUCTION: Bulgarian

LITERATURE RECOMMENDED:

1. Маркетинг 4.0 От традиционното към дигиталното, Филип Котлър, 2019, ISBN: 978 954 7832893
2. Международен маркетинг, Надя Миронова, 2017, НБУ, ISBN:9789545359668
3. Маркетинг на транспортната фирма, Хр.Първанов, Светла Цанкова, УИ Стопанство, 2007
4. Благоев Веселин, Маркетинг, С, Interndtional University,София 2003
5. Бърд Дрейтън, Директен маркетинг, Б, 1993
6. Волф Ябок, Маркетинг, С, 1995
7. Джефкинс Ф., Въведение в маркетинга, рекл. И Пр, С, 1993
8. Желев Симеон, Маркетингови изследвания, Тракия-М,София, 2002
6. Карас Честър, Търговските преговори...,ВТ, 1993
7. Котлър Филип, Маркетинг 3.0, София, 2010
8. Лъодюк Робер, Мениджмънт на рекламата, С, 1992
9. Маринова Елена, Маркетинг, продукт, реклама, В,1992
10. Маринова Елена, Маркетингов план, В,1996
11. Прайд У., Маркетинг концепции и стратегии, С, 1994
12. Фентън Джон, Как се продава срещу конкуренцията, С, 1992

COURSE DESCRIPTION

Name of the course: Ecology of road transport	Code: MpMAT11.1	Semester: 2
Type of teaching: Lectures, Laboratory exercises	Lessons per semester: L – 30, LE– 15	Number of credits: 3

LECTURERS: Assoc. professor Krasimir Ambarev, PhD, e-mail: kambarev@tu-plovdiv.bg
Technical University of Sofia, Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Elective for the students' specialty "Road Transport Management" at the Faculty of Mechanical Engineering, master level of degree.

AIMS AND OBJECTIVES OF THE COURSE: The goal of the course is to give students a solid understanding of the toxic components in the exhaust gases of cars with internal combustion engines, their measurement, vehicle emission standard and test cycles, pollution reduction systems for cars with petrol and diesel internal combustion engines, noise pollution, measurement of car noise, ways to reduce noise from cars.

COURSE DESCRIPTION: Main topics: toxic components in the exhaust gases of cars with internal combustion engines. Measurement of the content of toxic components in the exhaust gases, measuring devices - gas analysers and opacimeters. Vehicle emission standard. Test cycles for determination of the content of toxic components in the exhaust gases. Pollution reduction systems for cars with petrol and diesel internal combustion engines. Noise pollution. Measurement of car noise, ways to reduce noise from cars.

PREREQUISITES: Knowledge in physics, chemistry, technical mechanic, road vehicles.

TEACHING METHODS: Lectures and laboratory exercises supported by audio, video and multimedia equipment. Active teaching methods, constantly engaging the students, are used.

METHODS OF ASSESSMENT: Written exam.

LANGUAGE OF TEACHING: Bulgarian

BIBLIOGRAPHY:

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