

DESCRIPTION OF THE COURSE

Name of the course: Flight Safety	Code: BpAE14	Semester: 7
Type of teaching: Lectures(L) Laboratory work (LW)	Hours per semester: L – 30hours LW – 15 hours	Number of credits: 5

LECTURER(S):

Assoc. Prof. Eng. Krasimir Ambarev, (FME), тел. 659 518, e-mail: kambarev@tu-plovdiv.bg

Assist.Prof. Eng. Dancho Kolibarov, PhD, FME tel.: 965 593, e-mail: danchokol@tu-plovdiv.bg

Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory subject from the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, Navigation and Aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course the students are expected to be able to define and calculate safety performance indicators, to have basic knowledge of the Safety Management System and to apply different safety risk models for solving engineering problems. Students shall gain knowledge of the basic laws in ensuring flight safety, provided in ICAO documents (Annexes 1,2,6,8,12 13 and 19).

DESCRIPTION OF THE COURSE: The main topics concern: Basic aviation safety concepts; Safety Performance Indicators; Flight safety risk models; Safety Management System and Safety Risk Management; Flight safety in special operations and in special cases, abnormal and emergency conditions; Estimation of the conditional probabilities for aviation events; Analysis of the causes of human errors in maintenance; Flight safety information systems; Search and rescue; Aviation accidents and incidents investigation, etc. The legislative framework for flight safety assurance is introduced. Approaches to flight safety assessment in case of aircraft failures, errors of the operator and in the event of adverse environmental conditions are presented in order to properly organize and conduct preventive activities during operation. During the course students acquire skills to assess the impact of various factors on flight operations.

PREREQUISITES: Probabilities and statistics, Electrical Engineering, Electronics, Computing, Aerodynamics, Flight Performance.

TEACHING METHODS: Lectures, using slides, case studies, laboratory work, work in teams, protocols preparation and defence.

METHOD OF ASSESSMENT: Final exam (60%), laboratories (10%), protocols (30%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Маджаров Б. И., Безопасност на полетите (организационно-методически основи), София, 1999; 2. Ben Ale, Linda J Bellamy, RM Cooke, Martina Duyvis, Dorota Kurowicka, Pei Hui Lin, Oswaldo Morales, Alfred Roelen, John Spouge, Causal model for air transport safety: final report, NLR Air Transport Safety Institute, Netherlands, March 2009; 3. ICAO, Doc-9859, Safety Management Manual, Fourth Edition, 2018, 4. Маджаров Б. И., Основна безопасност на полета, София, ВИ, 1981.

DESCRIPTION OF THE COURSE

Name of the course: Flight Dynamics II	Code: BpAE15	Semester: 7
Type of teaching: Lectures (L) Laboratory work (LW)/Tutorials (T) Course work (CW)	Hours per semester: L – 30 hours T – 0 hours LW – 15 hours CW	Number of credits: 4
Course project (CP)	Code: -	Number of credits: -

LECTURER(S):

Assoc. Prof. Eng. Hristian Panayotov, tel.: 659 518, e-mail: hristian@tu-plovdiv.bg
 Assist. Prof. Eng. Stanimir Penchev, PhD (FMEIM), tel.: 659 632, e-mail: spenchev@tu-plovdiv.bg

Technical University of Sofia Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Compulsory subject of the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, navigation and aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course the students are expected to apply the methodology for modeling, simulation and analysis of the aircraft stability and control characteristics and use it to solve engineering problems.

DESCRIPTION OF THE COURSE: The main topics concern: Introduction to the static stability and its criteria. Static longitudinal stability and control. Longitudinal trim conditions. Lateral-directional stability and control. Stability and control characteristics for steady state, flight maneuvering. Effects of flight control system on the stability and control in steady state flight. Stability and control during perturbed state flight. Longitudinal dynamic stability. Lateral-directional dynamic stability. Inertial coupling. Helicopter stability and control analysis.

PREREQUISITES: Mathematics; Mechanics; Aircraft Aerodynamics; Flight Dynamics I; Aircraft Structures.

TEACHING METHODS: Lectures, using slides, laboratory works with protocols preparation and defence, demo-programs, preparation and defence of course work.

METHOD OF ASSESSMENT: Semester exam (70%), laboratories (10%), course work (20%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Маджаров Б., Динамика на полета: Устойчивост и управляемост на летателните апарати, Актив Комерс, 2000,337, ISBN 954-9962-05-9. 2. Тодоров М., Ръководство за лабораторни упражнения по Устойчивост и управляемост на въздухоплатателните средства, София, МПТУС, 2006. 3. Caughey D., Introduction to Aircraft Stability and Control, Cornell University, 2011. 4. Roskam J., Airplane Flight Dynamics and Automatic Flight Control – Part I, DARcorporation, Kansas, 2018, ISBN 1884885179.

DESCRIPTION OF THE COURSE

Name of the course: Aircraft II	Code: BpAE16	Semester: 7
Type of teaching: Lectures (L) Laboratory work (LW)/Tutorials (T) Course work (CW)	Hours per semester: L – 45 hours T – 15 hours LW – 15 hours	Number of credits: 6
Course project (CP)	Code:	Number of credits: 0

LECTURER(S):

[Assoc. Prof. Eng. Hristian Panayotov, PhD (FME), tel.: 032 659 514, e-mail: hristian@tu-plovdiv.bg]

Technical University of Sofia, Plovdiv Branch

COURSE STATUS IN THE CURRICULUM: Compulsory course for the bachelor students specialty “Aeronautical Engineering”, Faculty of Mechanical Engineering.

AIMS AND OBJECTIVES OF THE COURSE: [The aim of the course is to provide students with theoretical knowledge and practical skills about different kind of systems, used in aircrafts and rotorcrafts, their peculiarity and basic techniques for simulations.]

DESCRIPTION OF THE COURSE: [The main topics concern: Power supply systems, Hydraulic systems, Pneumatic systems, Oil systems, Fuel systems, Air conditioning, pressurization and oxygen systems, Fire protection systems, Ice protection, Propellers, Performance, structure and control of helicopter rotors, Helicopter transmission, Vibrations in rotorcrafts.]

PREREQUISITES: [The subject is based on the knowledge in “Hydraulic and Pneumatic Drives”; “Aerodynamics of aircraft”; “Aircraft structures ”..]

TEACHING METHODS: [Lectures, using slides; laboratory works by using computers for calculations and making protocols; home works, consultations..]

METHOD OF ASSESSMENT: laboratory works - 30%, written examination - 70 %

INSTRUCTION LANGUAGE: [Bulgarian]

BIBLIOGRAPHY: 1. Илиев В., Радусhev P. Летателни апарати – хеликоптери. Мадарапринт, София, 1999.; 2. Иванов Ц., Илиев В., Летателни апарати 2, ТУ, София, 1997 г. 3. Йорданов Д. Летателни апарати – системи за управление. Мадарапринт, София, 1999.; 4. Бельский В. Л. и др. Конструкция летательных аппаратов. Оборонгиз, Москва, 1963.; 5. Базов Д. И. Аэродинамика вертолета. Москва, Транспорт, 1972.

DESCRIPTION OF THE COURSE

Name of the course: BASIC OF RADIOTECHNICS	Code: BpAE17	Semester: 7
Type of teaching: Lectures (L) Laboratory work (LW) / Seminars (S) Course work (CW)	Hours per semester: L – 15 hours S – 0 hours LW – 15 hours	Number of credits: 3

LECTURER(S):

Assist. Prof. Eng. Stoyan Avramov, PhD, TATT (FMU), e-mail: stav@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory subject from the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, Navigation and Aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: The study of the course aims to deepen the preparation of students in the field of power supply systems and electrical equipment of aircraft.

DESCRIPTION OF THE COURSE: Main topics: The issues related to the principles of construction and operation of the power supply systems and the systems consuming electricity, their main elements and units are considered. Particular attention is paid to the automatic control and protection of electricity sources, the electricity distribution system and the systems of electrical equipment of aircraft. The peculiarities of technical and flight operation of the systems are also considered, etc.

PREREQUISITES: Basic knowledge of Physics; Mathematics; Theoretical foundations of electrical engineering; Theory of automatic control.

TEACHING METHODS: Lectures using slides, laboratory exercises based on testing workbenches and computer simulations of processes and systems.

METHOD OF ASSESSMENT: Written exam (80%), laboratory exercises (20%)

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: David Wyatt, Mike Tooley, Aircraft Electrical and Electronic Systems, Routledge 2018, ISBN: 978-1-138-58960-5; Стоянов Ц.Т. Системи за електроснабдяване на летателните апарати, ТУ-София, 2008; Стоянов Ц.Т. Авиационно оборудване на летателните апарати, ТУ-София, 1995;

DESCRIPTION OF THE COURSE

Name of the course: Aircraft Engines II	Code: BpAE18.1	Semester: 7
Type of teaching: Lectures (L) Laboratory work (LW)/Seminars (S) Course work (CW)	Hours per semester: L – 45 hours S – 15 hours LW – 15 hours	Number of credits: 6

LECTURER(S):

Assoc. Prof. Ph.D. Atanas Nachev, (FME), tel.: 659 514, e-mail: anachev@tu-plovdiv.bg
Technical University of Sofia, Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Compulsory elective subject from the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, navigation and aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: The objectives of the course are to provide students with knowledge of the basic structural design, loads and strength characteristics of aircraft gas turbine engines.

DESCRIPTION OF THE COURSE: The main topics concern: gas turbine engine arrangement design and loads; compressor, gas turbine, combustion chambers (main and afterburners) and exhaust systems structure; gas turbine engine fuel and lubricant systems design; static and dynamic strength of gas turbine engine blades, disks and rotors.

PREREQUISITES: The subject is based on the knowledge in “Mechanics”; “Strength of Materials”; “Aviation Materials”; “Aircraft Aerodynamics”; “Aircraft Engines I”.

TEACHING METHODS: Lectures, using projector; seminars with seminar presentations; laboratory works with protocols preparation and defence; consultations.

METHOD OF ASSESSMENT: Written examination (70%), seminars (20%), laboratory works (10%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Андонова М. М., Петров С. А., Вълчев Хр., Авиационни двигатели - конструкция, якост и моделиране на газотурбинни двигатели. С., Изд.”Актив Комерс”, 2002; 2. Лозицкий Л. П. и др., Конструкция и прочность авиационных газотурбинных двигателей. М., Воздушный транспорт, 1992; 3. Huenecke K., Jet Engines - Fundamentals of Theory, Design and Operation. Crowood Press UK, 2010; 4. Mattingly J. D., Heiser W. H., Pratt D. T., Aircraft Engine Design, AIAA Education Series, USA, 2002; 5. Kroes M. J. and Thomas W. W. Aircraft Powerplants, 9-th ed. Glencoe, McGraw-Hill, USA, 2018; 6. AC65-12A, Airframe&Powerplant Mechanics Powerplant Handbook, FAA; 7. Joint Aviation Requirements (JAR- Engine).

DESCRIPTION OF THE COURSE

Name of the course: Aircraft Design	Code: BpAE19.1	Semester: 7
Type of teaching: Lectures (L) Laboratory work (LW)/Tutorials (T) Course work (CW)	Hours per semester: L – 30 hours T – 0 hours LW – 15 hours	Number of credits: 6
Course project (CP)	Code: BpAE20.1	Number of credits: 2

LECTURER(S):

Assoc. Prof. Eng. Hristian Panayotov, PhD (FME), tel.: 032 659 514, e-mail: hristian@tu-plovdiv.bg

Technical University of Sofia, Plovdiv Branch

COURSE STATUS IN THE CURRICULUM: Elective course from for the bachelor students specialty “Aeronautical Engineering”, Faculty of Mechanical Engineering.

AIMS AND OBJECTIVES OF THE COURSE: The aim of the course is to meet the students with aircraft design methodology and design of their elements. Once the students have finished the course they should be able to apply the methods of conceptual and preliminary aircraft design

DESCRIPTION OF THE COURSE: Overview of the aircraft design process: Generating and evaluating design. Mission requirements development and constraint diagrams. Standard and certification specifications. Aircraft initial sizing. Empty weight prediction. Fuel weight prediction. Aircraft geometry selection: Wing placement. Fuselage shape. Engine and inlet placement. Tails. Landing gear arrangement. Thrust to weight ratio and wing loading. Crew station, passengers compartment and payload aerodynamics: Lift, drag, lift augmentation and wing design. Propulsion and fuel systems integration: Types of engines. Jet engine thrust considerations. Piston engine performance. Turboprop performance. Fuel systems. Weights: Approximate group weight methods. Performance: The design mission. Range. Endurance. Climb. Descent. Takeoff. Landing. Aircraft stability: Stability and control surface sizing. Center of gravity. Static longitudinal stability. Other measures of stability. Static lateral stability. Cost analysis. Element of life cost analysis. Cost estimating methods.

;

PREREQUISITES: It is based on the subjects: “ Aircraft Aerodynamics ”; "Aircraft Structures"; “Aircraft Engines”; "Aircraft instruments and automated systems", “Aircraft electrical systems”.

TEACHING METHODS: Lectures, using slides; laboratory works by using computers for calculations and making protocols; home works, consultations.

METHOD OF ASSESSMENT: laboratory works - 30%, written examination - 70 %

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Егер . Проектирование самолетов. Москва, Машиностроение, 1986; 2. Raymer Daniel P. Aircraft Design: A conceptual Approach. Third Editon. AIAA Educational Series, Reston, Virginia ISBN 1-56347-281-0; 3. Raymer Daniel P. RDS-Student: Software for Aircraft Design, Sizing and Performance Aircraft Design: A conceptual Approach. Third Editon. AIAA, Reston, Virginia ISBN 1-56347-047-0. 1992 г.

DESCRIPTION OF THE COURSE

Name of the course: Sport	Code: FaSPR07	Semester: 7
Type of teaching: Lectures (L) Laboratory work (LW)/Seminars (S) Self-Study (SS)	Hours per semester: L – 0 hours S – 0 hours SS – 30 hours	Number of credits: 1

LECTURER(S):

Assoc. Prof. Valentin Vladimirov, PhD (FEA), tel.: 032 659 646, e-mail: valdesv@tu-plovdiv.bg

Sen. Lect. Daniel Vladimirov, PhD (FEA), tel.: 032 659 646, e-mail: danielv@tu-plovdiv.bg

Sen. Lect. Krassimir Djaldeti, PhD (FEA), tel.: 032 659 648, e-mail: krsj@tu-plovdiv.bg

Lect. Petar Doganov, PhD (FEA), tel.: 032 659 648, e-mail: pdoganov@tu-plovdiv.bg

Lect. Boris Spasov (FEA), tel.: 032 659 647, e-mail: boris_spasov@tu-plovdiv.bg

Technical University of Sofia-Branch Plovdiv

Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Facultative subject from the curriculum for training of students to obtain Bachelor's degree, specialties Mechanical and Instrument Engineering, Mechanical Equipment and Technologies, Mechatronics Professional orientation 5.1 Mechanical engineering; Transport Equipment and Technologies, Aircraft Equipment and Technologies Professional orientation 5.5 Transport, Aviation and Shipping Navigation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: Targeted at further developing of students' physical activities, skills and hygiene habits through effective methods of physical education, improving their mental and physical performance.

DESCRIPTION OF THE COURSE: The knowledge and skills in Physical Education and Sports develop a wide range of motor skills and habits, help the hardening of the body and contribute to the moral development of students. The enhancement of physical skills is carried out through:

1. General Physical Preparedness (GPP) – in these seminars the students develop a wide range of motor skill and habits; work to improve strength, speed, endurance, flexibility, structure and skill; increase resistance to unfavourable environmental factors; develop their physical qualities and experience.
2. Sports-Specific Physical Preparedness (SPP) – students improve their sport skills and habits in a specific sport and gain experience through participation in competitions; work to improve strength, speed, endurance, flexibility, structure and skill; increase resistance to unfavourable environmental factors; develop their physical qualities and experience.

PREREQUISITES: The curricula presume the minimum of knowledge and skills acquired at secondary school.

TEACHING METHODS: Seminars in accordance with the curriculum in PE and Sport.

METHOD OF ASSESSMENT: Evaluation is based on functional tests at the end of semester. Lecturer's signature is required at the end of semester.

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Владимиров В. Туризм и ориентиране. Методическо ръководство за студентите от ТУ София, филиал Пловдив. Издателство на ТУ - София. 2010.

DESCRIPTION OF THE COURSE

Name of the course: Aircraft Maintenance	Code: BpAE21	Semester: 8
Type of teaching: Lectures(L) Laboratory work (LW)	Hours per semester: L – 30hours LW – 15 hours	Number of credits: 5

LECTURER(S):

Assist. Prof. Eng. Dancho Kolibarov, PhD, FME tel.: 965 593, e-mail: danchokol@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory subject from the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, Navigation and Aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course the students are expected to have: detailed understanding of continuing airworthiness aviation regulations; knowledge about aircraft's maintenance arrangement and structure, operational and technical instruction manuals, aircraft line maintenance, base maintenance of aircraft structure and systems.

The students will develop skills and gain knowledge about different factors' influence over aircraft and its equipment..

DESCRIPTION OF THE COURSE: The main topics concern: Continuing airworthiness fundamentals; Aircraft operation under various environmental conditions; Component and aircraft reliability; Maintenance programs and related maintenance practices; Maintenance arrangement and structure; Maintenance manuals and maintenance records; Equipment for aircraft maintenance; Aircraft line maintenance; Airframe, systems and equipment base maintenance; Engine maintenance and non-destructive testing; Repair, storage and modifications of aircraft; Troubleshooting and methods for diagnostics. Ground handling;

PREREQUISITES: Mathematics, Electrical Engineering, Electronics, Aerodynamics, Flight Performance, Flight dynamics, Aircraft Structures, Aircraft Systems, Avionics, Aircraft Engines, Flight safety.

TEACHING METHODS: Lectures, using slides, case studies, laboratory work, work in teams, protocols preparation and defence.

METHOD OF ASSESSMENT: Final exam (80%), laboratories (20%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: Easy Access Rules for Continuing Airworthiness (Regulation (EU) No 1321/2014), EASA, 2019; CAP 562, Civil Aircraft Airworthiness Information and Procedures, UK CAA, 2020; FAA-H-8083-30A, Aviation Maintenance Technician Handbook—General, FAA, 2018; FAA-H-8083-31A, Aviation Maintenance Technician Handbook-Airframe, FAA, 2018; Kinnison, H.A., Aviation Maintenance Management, McGraw-Hill, 2004; Mark Davies, Standard Handbook for Aeronautical and Astronautical Engineers, McGraw-Hill, 2002.

DESCRIPTION OF THE COURSE

Name of the course: BASIC OF RADIOTECHNICS	Code: BpAE22	Semester: 8
Type of teaching: Lectures (L) Laboratory work (LW) / Seminars (S) Course work (CW)	Hours per semester: L – 30 hours LW – 15 hours CW - 1	Number of credits: 5

LECTURER(S):

Assist. Prof. Eng. Stoyan Avramov, PhD, TATT (FMU), e-mail: stav@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory subject from the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, Navigation and Aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: After completing the course, students should be able to analyze the condition of aeronautical electronic equipment for individual classes of aircraft, to give assessment and proposals for retrofitting aircraft, to be able to service the existing fleet of aeronautical electronic equipment.

DESCRIPTION OF THE COURSE: Main topics: Aviation communications systems, short-range navigation systems, long-distance navigation systems, Doppler speed and angle meters, radio altimeter, Weather and navigation radar, global navigation satellite systems.

PREREQUISITES: Basic knowledge of Physics; Mathematics; Theoretical foundations of electrical engineering; Theory of automatic control; Navigation -1; Transmission media (Radio engineering).

TEACHING METHODS: Lectures using slides, laboratory exercises based on testing workbenches and computer simulations of processes and systems.

METHOD OF ASSESSMENT: Written exam (80%), laboratory exercises (20%), Course work presentation.

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: Mike Tooley, David Wyatt, "Aircraft Communications and Navigation Systems", Elsevier 2007, ISBN: 978-0-7506-81377; Ц. Петров, П. Русанов, М. Маринов, "Радиоелектронни устройства и системи на съвременни граждански самолети", Военно издателство 2003; Ian Moir, Allan Seabridge, Civil Avionics Systems, 2003, PEP Ltd., ISBN 1 86058 342 3

DESCRIPTION OF THE COURSE

Name of the course: Aircraft and Engine Control Systems	Code: BpAE23.1	Semester: 8
Type of teaching: Lectures (L) Laboratory work (LW)/Tutorials (T) Course work (CW)	Hours per semester: L – 45 hours T – 0 hours LW – 15 hours	Number of credits: 6

LECTURER(S):

Assist. Prof. Eng. Stanimir Penchev, PhD (FMEIM), tel.: 659 632, e-mail: spenchev@tu-plovdiv.bg

Technical University of Sofia Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Compulsory elective subject of the curriculum for training of students to obtain Bachelor's degree, specialty Aeronautical Engineering, Professional orientation 5.5 Transport, navigation and aviation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course the students are expected to be able to apply methodologies for modeling, simulation and analysis of the characteristics of aircraft control systems and aircraft engines and use them to solve engineering problems.

DESCRIPTION OF THE COURSE: The main topics concern: Flight qualities and pilot ratings, regulations and applications. Characteristics of flight control system. Classical control theory: aircraft and pilot transfer functions. Stability augmentation and automatic flight control systems. Principles of helicopter control systems. Principles of gas turbine fuel control. Gas turbine engine control parameters. Types of gas turbine engine control systems. Gas turbine engine control system characteristics.

PREREQUISITES: Automatic Control Theory, Aerodynamics of Aircraft, Flight Dynamics I, Aircraft Structures I, Aircraft Engines I, Flight Dynamics II, Aircraft Structures II, Aircraft Engines II.

TEACHING METHODS: Lectures, using slides, laboratory works with protocols preparation and defence, demo-programs.

METHOD OF ASSESSMENT: Two one-hour assessments at mid and end of semester (80 laboratories (20%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Йорданов Д., Летателни апарати - системи за управление, Мадара - Принт, София, 1999,277, ISBN 954-9962-03-2; 2. Йорданов Д., Компютърни модели на системи за управление на самолети и хеликоптери, ТУ-София, 2004, ISBN 954-438-451-0. 3. Moir I., A. Searbridge, Aircraft Sytems: Mechanical, electrical, and avionics subsystems integration, John Wiley & Sons Ltd, 2008, ISBN 978-0-470-05996-8; 4. Roskam J., Airplane Flight Dynamics and Automatic Flight Control – Part I, DARcorporation, Kansas, 2018, ISBN 1884885179; 5. Nelson R., Flight Stability and Automatic Control, McGraw-Hill, Boston, 1998, ISBN 0-071008-35-7.

DESCRIPTION OF THE COURSE

Name of the course: Aviation management(AM)	Code: BpAE24	Semester: 8
Type of teaching: Lectures(L) Laboratory work (LW)/Seminars (S) Course work (CW)	Hours per semester: L – 30hours S –15 hours	Number of credits: 4

LECTURER(S):

Assoc. Prof. Toni Mihova, PhD (FME), tel.: 0893 69 06 55, e-mail:mihova@tu-plovdiv.bg

Chief Assist. Prof. .DesislavaShatarova, PhD (FME), tel.: 359 32 659 716, e-mail: desislava@tu-plovdiv.bg

Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: The course“Aviation management”is included as mandatory for Bachelor degree students in “Aircraft equipment and technologies” at the Faculty of Mechanical Engineering, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE:Learning fundamentals and modern condition of dynamic management processes in way students to be able to analyse ongoing managerial processes in aircraft enterprise as system.

DESCRIPTION OF THE COURSE:TheMain topics:Main functions in aircraft enterprise management: planning, organizing and control. Communication in aircraft enterprise management. Style of management, management decisions, management of conflicts.

PREREQUISITES:Fundamentals of economy of enterprise, industrial management and Humanites..

TEACHING METHODS: Lectures with presentations, discussions with active participation of students after preparation. ..

METHOD OF ASSESSMENT:Final assessment, resulting in a mark, consisting of two components: exam’s test with a weight of 0,50 and assessment of the performance during the semnarswith a factor of 0,50..

INSTRUCTION LANGUAGE:Bulgarian

BIBLIOGRAPHY:1. Ivanov,Iv.Fundamentals of management, "Macros", Plovdiv, 2.Angelov, A., Fundamentals of management, “Polina comers”, Sofia, 2009 3. Donchev, D., Management of enterprise.. operation Plovdiv.4.Mihova, T., Economy of enterprise, Macros, Plovdiv, 5.Hristova, N., Effective management of aircraft transport security by balance systems of indicators 2012, 6.Cramer, C., and Thams, A.,Airline Revenue Management: Current Practices and Future Directions, 2021,7.Samunderu, E.,Air Transport Management: Strategic Management in the Airline Industry, 2019, 8. Gerald N. Cook and Bruce Billig, Airline Operations and Management: A Management Textbook, 2017..

DESCRIPTION OF THE COURSE

Name of the course: Sport	Code: FaSPR08	Semester: 8
Type of teaching: Lectures (L) Laboratory work (LW)/Seminars (S) Self-Study (SS)	Hours per semester: L – 0 hours S – 0 hours SS – 30 hours	Number of credits: 1

LECTURER(S):

Assoc. Prof. Valentin Vladimirov, PhD (FEA), tel.: 032 659 646, e-mail: valdesv@tu-plovdiv.bg

Sen. Lect. Daniel Vladimirov, PhD (FEA), tel.: 032 659 646, e-mail: danielv@tu-plovdiv.bg

Sen. Lect. Krassimir Djaldeti, PhD (FEA), tel.: 032 659 648, e-mail: krsj@tu-plovdiv.bg

Lect. Petar Doganov, PhD (FEA), tel.: 032 659 648, e-mail: pdoganov@tu-plovdiv.bg

Lect. Boris Spasov (FEA), tel.: 032 659 647, e-mail: boris_spasov@tu-plovdiv.bg

Technical University of Sofia-Branch Plovdiv

Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Facultative subject from the curriculum for training of students to obtain Bachelor's degree, specialties Mechanical and Instrument Engineering, Mechanical Equipment and Technologies, Mechatronics Professional orientation 5.1 Mechanical engineering; Transport Equipment and Technologies, Aircraft Equipment and Technologies Professional orientation 5.5 Transport, Aviation and Shipping Navigation, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: Targeted at further developing of students' physical activities, skills and hygiene habits through effective methods of physical education, improving their mental and physical performance.

DESCRIPTION OF THE COURSE: The knowledge and skills in Physical Education and Sports develop a wide range of motor skills and habits, help the hardening of the body and contribute to the moral development of students. The enhancement of physical skills is carried out through:

1. General Physical Preparedness (GPP) – in these seminars the students develop a wide range of motor skill and habits; work to improve strength, speed, endurance, flexibility, structure and skill; increase resistance to unfavourable environmental factors; develop their physical qualities and experience.
2. Sports-Specific Physical Preparedness (SPP) – students improve their sport skills and habits in a specific sport and gain experience through participation in competitions; work to improve strength, speed, endurance, flexibility, structure and skill; increase resistance to unfavourable environmental factors; develop their physical qualities and experience.

PREREQUISITES: The curricula presume the minimum of knowledge and skills acquired at secondary school.

TEACHING METHODS: Seminars in accordance with the curriculum in PE and Sport.

METHOD OF ASSESSMENT: Evaluation is based on functional tests at the end of semester. Lecturer's signature is required at the end of semester.

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Владимиров В. Туризм и ориентиране. Методическо ръководство за студентите от ТУ София, филиал Пловдив. Издателство на ТУ - София. 2010.