DESCRIPTION OF THE COURSE

Name of the course: **Management of Logistics Systems**	Code: **BpIM21**	Semester: **7**
Type of teaching: Lectures (L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 15 hours	Number of credits: **4**

LECTURER(S):

Assist. Prof. Nikolay Katrandzhiev, PhD - telephone: 659 715,
email:nkatrandzhiev@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory course in the curriculum of the Bachelor Degree Programme in Industrial Management., Professional qualification 5.13 General Engineering, Professional field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: The course is targeted at acquainting students with the existing basic elements of logistics and logistics approach and the process of management of logistics systems and operations, as well as at developing practical skills for management of logistics systems.

DESCRIPTION OF THE COURSE: Main topics: Logistics as a science, the essence of the logistics approach, logistics concepts and tools; Logistics goals and logistics tasks; Micro and macro logistics; Material and information flows; Development of logistics and features of modern logistics. Supply chain. Logistics system; Functional areas of logistics; The logistics system and logistics subsystems in the enterprise; Supply logistics; Warehouse logistics; Inventory logistics; Production logistics; Distribution logistics; Transport logistics, Information logistics, Reverse logistics; Logistics costs; Logistics management.

PREREQUISITES: Economics of industrial enterprise, Fundamentals of Management, Marketing, Marketing management, Production management, Information and Communucation Technologies, Internet Technologies.

TEACHING METHODS: Lectures with presentations, case studies, business games and laboratory.

METHOD OF ASSESSMENT: Two one-hour assessments at mid and end of semester (62%), laboratories (18%), course work - two off assignments (20%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Джон Гаторна, Основи на логистиката и дистрибуцията, Делфинпрес, 1995. 2. Цветнен Цветков, Търговска логистика, Стено, 2011. 3. Анастас Кехайов, Управлявай логистиката на закупуването и производството, Алфа куолити България, 2015. 4. Николай Драгомиров, Мирослава Раковска, Камен Луканов, Бизнес логистика, УНСС 2018. 5. Цветнен Цветков, Стопанска логистика. Варна, 2006 6. Taylor, G., Logistics engineering handbook. CRC press, London, New York, 2007.

DESCRIPTION OF THE COURSE

Name of the course: **Innovation Management**	Code: **BpIM22**	Semester: 7
Type of teaching: Lectures (L) Seminars (S))	Hours per semester: L – 30 hours S – 30 hours	Number of credits: 5

LECTURER(S):
Prof. Valentina Nikolova-Alexieva, PhD, tel.: 0885 69 66 69, email: valentina_nikolova@abv.bg
Assist. Prof. Eng. Tanya Gigova, PhD (FME), tel.: 659 717, e-mail: gigova@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 Industrial Management, Professional orientation 5.13 General Engineering.

AIMS AND OBJECTIVES OF THE COURSE: The students need to broaden, enrich and deepen their knowledge of the theoretical foundations of innovation management and to master specific management problems in innovation and practical application in industrial enterprises. At the end of the course students will possess the theoretical, methodological, organizational, managerial and practical aspects of the creation of new products and their funding..

DESCRIPTION OF THE COURSE: The main topics concern: Innovation and the Knowledge economy; Innovation system, innovation financing, Discovery and invention, science and technology transfer; Diffusion of innovation, classification of innovation; Sources of innovation; Methods for generating new ideas; Innovative strategies; Planning, organizing, directing and controlling of innovation; Assessment of innovative projects; Forms of innovation cooperation..

PREREQUISITES: Basic knowledge of Management, Economics, Mathematics and Engineering..

TEACHING METHODS: Lectures with multi-media presentations and discussions.Seminars - case studies, tasks, discussions with the active participation of students after preliminary preparation..

METHOD OF ASSESSMENT: Written exam with tests (80 %), seminars (20%).)

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Taneva N. Innovation Management. King, Sofia, 2015, ISBN 978-954-9518-40-5; 2. Varamezov L. Innovation Management. Acad. Ed. Tsenov, Svishtov, 2013 , ISBN 978-954-23-0817-1; 3. Vitliemov P. Innovation Management. Primax, Ruse, 2013, ISBN 978-619-7071-11-5; 4. Damyanova L. Guide to Exercises in Innovation Management. TTMU, Sofia, 2017, ISBN 978-954-465-096-4; 5. Petrov N. Innovation Management and Entrepreneurship, Zhelyo Uchkov, Yambol, 2020, ISBN 978-954-391-142-4..

DESCRIPTION OF THE COURSE

Name of the course: **Finance**	Code: **BpIM23**	Semester: 7
Type of Teaching: Lectures(L) Seminars (S)	Hours per semester: L – 30hours S – 20 hours	Number of credits: **5**

LECTURERS:

Assoc. Prof. PhD Vladimir Ivanov", tel.: 032/659715; e-mail: vivanov@tu-plovdiv.bg

COURSE STATUS IN THE CURRICULUM: Compulsory for full-time Industrial Management students in the Faculty of Mechanical Engineering, Bachelor's Degree.

AIMS AND OBJECTIVES OF THE COURSE: Students get acquainted with the theory, methods and tools for company finance management.

DESCRIPTION OF THE COURSE: Nature and functions of finance and finance management; cost of money in terms of time; risk and returns; capital budgeting; assesment of ivestment projects; funding sources; long-term and short-term funding; management of floating capital; capital structure of the company; valuation of companies; financial planning of the company.

PREREQUISITES: Basic concepts in Mathematics, Industrial Company Economics and Financial Accounting.

TEACHING METHODS: Lectures and seminars. A multimedia beamer is used in lectures; computers, calculators and written assignments – in seminars.

METHOD OF ASSESSMENT: Examination assessment in the form of a written test and practical problems solving. Weighing in the final grade as it follows: 60% from the final test result and 40% from the completion of the practical tasks.

INSTRUCTION LANGUAGE: Bulgarian.

BIBLIOGRAPHY:

1. Финанси - Иванов Владимир, Пловдив, Интелексперт-94, 2021
2. Въведение във финансите – Вачков Стефан и др., изд. „Наука и икономика", ИУ – Варна 2017
3. Корпоративни финанси – Спасова Емилия, Варна, изд. РИС, 2011
4. Петров Г. Основи на финансите на фирмата, С., Тракия-М, 2010
5. Финансов анализ – Касърова Виолета, София, изд. на НБУ, 2013
6. Финансов анализ – сборник от задачи и тестове, Георгиева Даниела, Манолов Цветомир, Велчев Константин, изд. „Наука и икономика", ИУ – Варна 2017
7. Търговски закон -2021 г.
8. Закон за счетоводство – 2016 г.
9. Закон за ДДС – 2021 г.
10. Закон за корпоративното подоходно облагане - 2021 г.

DESCRIPTION OF THE COURSE

Name of the course: **Organizational behavior (OB)**	Code: **BpIM24**	Semester: **7**
Type of teaching: Lectures(L) Laboratory work (LW)/Seminars (S) Course work (CW)	Hours per semester: L – 30hours S – 20 hours LW –0 hours	Number of credits: **4**

LECTURER(S):
Assoc. Prof. Toni Mihova, PhD (FME), tel.: 0893 69 06 55, e-mail: mihova@tu-plovdiv.bg
Assist. Prof. Eng. Tanya Gigova, PhD (FME), tel.: 659 717, e-mail: gigova@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: The course "Organizational behavior" is included as mandatory for Bachelor's degree students in Industrial Management, specialty Industrial Management, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: The students need to deepen their knowledge of the theoretical foundations of "Organizational behavior" (OB), to master the specific problems in the field of OB and to acquire practical skills to control the communication in an enterprise, the group behavior, the organizational culture and the organizational change under conditions of crises.

DESCRIPTION OF THE COURSE: The Main topics: Communication within the company; Management style; Decision making; Group management; Managing conflicts Organizational development, culture and change.

PREREQUISITES: Management, sociology, psychology.

TEACHING METHODS: Lectures with presentations, discussions with active participation of students after preparation; Seminar exercises – with course assignments, comprising description and defence.

METHOD OF ASSESSMENT: Ongoing assessment, resulting in a mark, consisting of two components: two tests with a weight of 0,35 each and assessment of the performance during the seminar exercises with a factor of 0,30..

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY:1. Paunov, M.,and al, Organizational behavior, Sofia, 2019; 2. Panayotov, D., Organizational behaviour – the new paradidms of human development Sofia, 2018; 3.Mihova, T., Organizational behaviour, Plovdiv, 2017; 4. Davidkov, Tz., Organizational management, Sofia, 2010; 5. Davidkov, Tz., National and other organizational cultures, 2009; 6.Ilieva, S., The values and labour motivation, Sofia, 2009; 7. Kuzmanov, G.and al, Organizational behaviour, Plovdiv, 2008; 8. Parkinson, M. Psychometric Tests,Sofia, 2010; 9. Harvard Business Review, Management of the talent, Sofia., 2009, 10.Mullins L., Management and Organizational Behaviour, 2003.

DESCRIPTION OF THE COURSE

Name of the course: **Industrial property and patent policy**	Code: **BpIM25.1**	Semester: **7**
Type of teaching: Lectures(L) Seminars (S)	Hours per semester: L – 30hours S – 20 hours	Number of credits: **4**

LECTURER(S):
Assoc. Prof. Eng. Ivan Shopov, PhD (FMU), tel.: 0895587547,, e-mail:ivan_chopov@abv.bg
Assist. Boicho Bochev, PhD (FMU), tel.: 0895587460, e-mail: brp.p@abv.bg
Technical University of Sofia, branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Elective facultative subject from the curriculum / curricula for training of students to obtainBachelor's degree, specialty Industrial Engineering, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: After completing the course, students acquire the knowledge and skills to be the basis, incentive, and starting point for improvement and deepening in the protection of industrial property and conducting an adequate patent policy.

DESCRIPTION OF THE COURSE: Main topics: in the discipline are studied: intellectual and industrial property; the legal protection of the various objects of industrial property (inventions, utility models, trademarks, geographical indications, industrial design) and copyright; production secrets and their transfer as know-how; various forms of patent policy. Particular attention is paid to the specific features of patent information and ways of handling patent documents.

PREREQUISITES: Information and communication technologies, Internet technologies, Production technologies, Economic technologies, Fundamentals of management, Production engineering, Industrial legislation.

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

METHOD OF ASSESSMENT: Two one-hour written current assessments in the middle and end of the semester (62% in total), participation in seminars (38%)

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Borisov, B. Intellectual property of the industrial company. S., UI Economy, 2006. 2. Ivanova, A., I. Ivanov. Trademarks - Oppositions. S., ed. IPBulgaria, 2015. 3. Georgieva, R. Patent activity as an economic indicator. Sofia, Applied Research and Communications Foundation, 2011. 4. Georgieva, R. Industrial property - patents for inventions, utility models, know-how. Gabrovo, UI "V. Aprilov", 2011. 5. Borisova, V. Intellectual property and property. IM Economy, 2010. 6. Idris, K. Intellectual property - a powerful tool for economic growth. S.,

DESCRIPTION OF THE COURSE

Name of the course: **Labor law**	Code: **BpIM25.2**	Semester: **7**
Type of teaching: Lectures(L) Seminars (S)	Hours per semester: L – 30hours S – 20 hours	Number of credits: **4**

LECTURER(S):
Assoc. Prof. Eng. Ivan Shopov, PhD (FMU), tel.: 0895587547,, e-mail:ivan_chopov@abv.bg
Assist. Boicho Bochev, PhD (FMU), tel.: 0895587460, e-mail: brp.p@abv.bg
Technical University of Sofia, branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Elective from the curricula for training students for "Bachelor's Degree", specialty "Industrial Management", professional direction 5.13 General Engineering, District 5. Technical sciences.

AIMS AND OBJECTIVES OF THE COURSE: After completing the course, students should be able to apply their knowledge in the work of staffing enterprises and regulating public relations related to labor.

DESCRIPTION OF THE COURSE: Main topics: subject, system, sources, basic principles of labor law, association of trade unions and employers, tripartite cooperation, collective bargaining, employment relationship, grounds for its occurrence, employment contract, working hours, vacations, holidays, labor discipline, disciplinary liability , property liability of the employer, property liability of the employee, wages, health and safety at work, labor protection of some workers, termination of employment, length of service, individual and collective labor disputes, control of compliance with labor legislation.

PREREQUISITES: Information and communication technologies, Internet technologies, Production technologies, Economic technologies, Fundamentals of management, Industrial legislation, Production engineering

TEACHING METHODS: Lectures using slides, seminars with discussions, practical examples and case studies.

METHOD OF ASSESSMENT: Two one-hour written current assessments in the middle and end of the semester (62% in total), participation in seminars (38%)

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY: 1. Labor law - textbook, Vasil Mrachkov, ed. Sibi, 2018, ISBN: 9786192260712; 2. Commentary on the Labor Code, V. Mrachkov, Kr. Sredkova, Sibi Publishing House, 2016, ISBN: 9789547309753; 3. Labor Code 2021, ISBN: 9789546082848

DESCRIPTION OF THE COURSE

Name of the course: **Intelligent production systems**	Code: **BpIM26**	Semester: **7**
Type of teaching: Lectures (L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 25 hours	Number of credits: **5**

LECTURER(S):
Chf. Asst. Prof. Radoslav Hrischev, PhD tel.: 032 659525, e-mail: hrischev@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 Industrial Engineering, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: This course introduced knowledge about modern intelligent production systems. Students get acquainted with the development of production systems. The course introduces students to the basic discrete production structures, their automation and information integration. Different types of production systems are considered. Acquire knowledge of modern management methods in the industry as a result of the entry of Industry 4.0. The main aspects of Industry 4.0 and how they affect management methods are discussed.

DESCRIPTION OF THE COURSE: The course presents the main types of discrete and continuous production systems, models of their work and metrics, structures and methods for automation of the production process; Students acquire knowledge and skills for the automation of production processes with programmable logic controllers; Robotics (kinematics, industrial environment, control and programming); The identification of the objects, the methods of data collection, storage and processing. Modern integrated information management systems are considered.

PREREQUISITES: Physics, Mechanics, Informatics, Production Management.

TEACHING METHODS: Lectures, presentations, demonstrations, simulations, laboratory exercises, group work, protocols and defense.

METHOD OF ASSESSMENT: Written exam - test at the end of the semester (80%), laboratory work in team (20%) with protocols and defense.

INSTRUCTION LANGUAGE: In Bulgarian

BIBLIOGRAPHY: 1. Gershwin S., B., 1994, Manufacturing systems engineering, ISBN 0-13-560-608X. 2. De Ron A., J., 1999, Performance measures for technical production systems, Eindhoven University of technology, School of industrial Engineering and management science, Syllabus; 3. Lin Zhang at all, 2014, Cloud manufacturing: a new manufacturing paradigm, Enterprise Information Systems, Vol. 8, 167-187. 4. SAP University Alliances, Introduction to Industry 4.0.

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 Vladimdirov, 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_spassov@tu-plovdiv.bg
Technical University of Sofia-Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Facultative subject from the curriculum for training of students to obtain Bachelor's degree, specialty „Industrial Engineering“, „Design and printed communications“, Professional orientation 5.13 General Engineering, 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. Туризъм и ориентиране. Методическо ръководство за студентите от ТУ София, филиал Пловдив. Издателство на ТУ - София. 2010.

DESCRIPTION OF THE COURSE

Name of the course: **Analysis of economic activities**	Code: **BpIM28**	Semester: **8**
Type of teaching: Lectures (L) Laboratory work (LW) Course work (CW)	Hours per semester: L – 30 hours LW – 30 hours	Number of credits: **6**

LECTURER(S):

Prof. Asen Konarev (UFT), tel.: 0882933405, e-mail: akonarev@abv.bg

COURSE STATUS IN THE CURRICULUM: Compulsory subject from the curriculum for training of students to obtain Bachelor's degree, specialty Industrial Management, Professional orientation 5.13. General Engineering, Field 5. Technical Sciences

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course the students will know and apply the main approaches and models for business analysis, methods and indicators for analysis of this activity, the main information sources for analysis, evaluation, monitoring and management of business. As future managers, students will be able to analyze and manage the economy of enterprises in order to improve business results.

DESCRIPTION OF THE COURSE: The main topics concern: Nature and approaches for business analysis; Types and models for analysis; Methods and indicators for analysis; Industry and company; Information for business analysis; Analysis of assets and capital; Analysis of income, expenses and financial result; Analysis of efficiency, effectiveness and return; Cash and cash flow analysis; Analysis of liquidity and business activity; Analysis of financial power and financial leverage; Analysis of corporate growth and total factor productivity.

PREREQUISITES: Economics of the industrial enterprise; Accounting; Finance; Mathematics - first and second part; Quantitative methods and statistics; Information and communication technologies.

TEACHING METHODS: Lectures using modern information technologies, laboratory exercises with analysis on real economic data of public and non-public industrial enterprises.

METHODS OF ASSESSMENT: Written exam (50%), laboratory work (20%), term paper (30%)

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY:
1. Konarev, As., Sn. Konstantinova. Analysis of the economic activity of industrial companies. KSI-Plovdiv, 2017; 2. Konarev, As., Sn. Konstantinova. Finance and financial management of the company. Zhanet 45 – Plovdiv, 2015; 3. Georgieva, An., Tsv. Yankova, Evg. Popova and co. The new tax legislation. Labor and law – Sofia, 2021.

DESCRIPTION OF THE COURSE

Name of the course: **Business entrepreneurship**	Code: **BpIM29.1**	Semester: **8**
Type of teaching: Lectures(L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 15 hours	Number of credits: **4**

LECTURER(S):
Assoc. Prof. Snezhinka Konstantinova, PhD, tel.: 0882 933518, e-mail: sks_ko@abv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory elective course from the curriculum / curricula for students to study for a Bachelor's degree, specialty 'Industrial Management', professional field 5.13 General Engineering, field 5. Technical sciences.

AIMS AND OBJECTIVES OF THE COURSE: After completing the course, students should be able to apply the methods of business entrepreneurship, to reveal business ideas, to compile an entrepreneurial business plan, to register companies; to participate in entrepreneurial networks.

DESCRIPTION OF THE COURSE: Main topics: The essence of entrepreneurship; Types of entrepreneurs and entrepreneurship; Assessment and development of entrepreneurial qualities of the individual; Profile of the modern entrepreneur; Methods for revealing business ideas; Choosing a new or existing business; Entrepreneurial business plan; Determining the need for initial capital; Financing and presentation; Basic steps and documents for company registration; Entrepreneurship and business networks; Entrepreneurial ecosystem; Social responsibility of entrepreneurs; Organizations in support of entrepreneurs.

PREREQUISITES: Fundamentals of management; Marketing; Economics of the industrial enterprise; Human resources management; Innovation management; Accounting; Finance.

TEACHING METHODS: Lectures using modern information systems; laboratory exercises for creating and developing your own business.

METHOD OF ASSESSMENT: One hour of on-going assessment to determine the entrepreneurial qualities of the individual (30%), laboratory exercises to protect the entrepreneurial business plan (70%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY:1. Konarev, A., Sn. Константинова. Business entrepreneurship. Plovdiv: KSI, 2019. ISBN 978-954-2942-36-8; 2. Kiosaki, R. Rich dad, poor dad. S.: Anhira, 2018. ISBN 978-954-2929-55-0; 3. Kawasaki, G. The Art of Starting Your Own Business 2.0. S.: Enthusiast, 2017. ISBN 978-619-1642-29-8

DESCRIPTION OF THE COURSE

Name of the course: **Public Relations**	Code: **BpIM29.2**	Semester: 8
Type of teaching: Lectures (L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 15 hours	Number of credits: 4

LECTURER(S):
Assoc. Prof. Toni Mihova, PhD (FME), tel: 032 659 714, e-mail: expert2009@abv.bg
Assist. Prof. Elena Zlatanova-Pazheva, PhD (FME), tel.: 032 659 712,
e-mail: elyzlatanova@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory elective subject from the curriculum for training of students to obtain Bachelor's degree, specialty Industrial Management, Professional orientation 5.13 General Engineering.

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course the students are expected to acquire and deepen their knowledge of the basic concepts in public relations theory, to have basic knowledge and to be able to apply the principles, techniques and tools used in practice to conduct effective PR policy..

DESCRIPTION OF THE COURSE: The scope of the course traces the evolution of public relations and the definition of the modern concept in practice. Public relations in the organizations and the role of the manager and the employees in the realization of the PR function are considered. Communications in social systems are studied and special attention is paid to communication as a process. The internal relations in the organization and the communication with the employees are considered. The study of audiences as an object of PR and public opinion in the context of techniques for creating and maintaining a positive public opinion is affected. The negative aspect related to propaganda and manipulation of public opinion is also covered. The means of mass communication with their essence, classification and functions are presented. Corporate reputation and its interaction with image and identity are examined in detail. The techniques for effective management of the media image, as well as the procedures for its construction and management are discussed. The organizational aspects of public relations are covered with an emphasis on the algorithm for organizing a press conference and a special event. Attention is paid to the planning, operation and management of PR in times of crisis. The ethical bases for practicing the profession of public relations are presented..

PREREQUISITES: Marketing, Communication Skills, Organizational Behavior, Human Resource Management.

TEACHING METHODS: Lectures using presentations, discussions with the active participation of students after preliminary preparation. Laboratory exercises - discussion of cases, according to the educational program..

METHOD OF ASSESSMENT: The evaluation method is through final assessment.

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY:

1. Stanev, V., What is and what is not PR, Ciela, 2013
2. Navarro, D., Dictionary of Body Language, East-West, 2019
3. Dobreva, E., Theses on the theory of mass communication, Shumen University, 2013
4. Penevska, V., Basic communication skills, Graal, 2016

5. Boykov, V., Boykov, D., Oral and written business communication, Orpheus Lyre Academy, 2015
6. Borisova, L., Vedar, J., Written and oral communications, Sofia, International Business School, 2011
7. Hristov, Ch., Georgiev, B., Bacheva, I. and team, Reputation Crisis Management, Sofia University, 2017
8. Dimov, P., Web Copywriting, 2011, http://www.postvai.com/
9. Hristov, R., PR Practice: Customer Relationships, Roy Communication, 2016
10. Hristov, A., PR practice: Working with an agency, Roy Communication, 2012
11. Bondikov, V., PR as an object of knowledge, Paradox, 2020
12. Lermer, R., Direct PR, Classics and Style, 2010
13. Chuturkova, M., Crisis PR, Ciela, 2012
14. Stoykov, L., Public Relations Management, ed. Alma Communication, 2019
15. Bernays, E., Propaganda, ed. East-West, 2019
16. Bernays, E., Formation of Public Opinion, ed. East-West, 2020
17. Uzunova, Ts., Beyond PR, ed. Labor, 2021
18. Markov, T., Black PR and new actions, ed. Janet-45, 2014
19. Despotova, K., Social Networks and Television PR, ed. Paradigm, 2019
20. Eftimova, A., Media Language and Style: Theory and Contemporary Practices, ed. UI "St. Kliment Ohridski", 2014
21. Hristov, A., 42 laws of PR, ed. AMG Publishing, 2019
22. Kotler, Ph., Corporate Social Responsibility, Roy Communication, 2011
23. Mavrodieva, I., Rhetoric and Public Relations, ed. UI "St. Kliment Ohridski", 2013.

DESCRIPTION OF THE COURSE

Name of the course: **Management information systems**	Code: **BpIM30.1**	Semester: **8**
Type of teaching: Lectures (L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 15 hours	Number of credits: **4**

LECTURER(S):
Chf. Asst. Prof. Radoslav Hrischev, PhD tel.: 032 659525, e-mail: hrischev@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory elective subject from the curriculum for training of students to obtain Bachelor's degree, specialty Industrial Management, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: To introduce the basic knowledge of the organization of modern integrated management information systems based on real working systems. The course is the first step and prerequisite for additional training and acquisition of specific skills for working with ERP systems.

DESCRIPTION OF THE COURSE: The main topics include: Overview and description of information systems, their place in automation systems; Description of Bulgarian systems; Description of SAP as the number one ERP system in the world; Consideration of the main modules of the system, their interconnection and significance; Detailed overview of the most important modules. Practical skills for working with the system based on exercises in demonstration and test systems hosted on specialized training servers.

PREREQUISITES: Informatics, System Control.

TEACHING METHODS: Lectures, presentations, demonstrations, simulations, laboratory exercises, group work, protocols and defense.

METHOD OF ASSESSMENT: One-hour written assessment - test at the end of the semester (75%), laboratory work (25%) with protocols and defense

INSTRUCTION LANGUAGE: In Bulgarian

BIBLIOGRAPHY: 1. Tudjarov H, Information Systems, 2007: http://tuj.asenevtsi.com/, 2. SAP University Alliances, Global Bike (GBI) curricula. 3. Open online courses and certification: https://open.sap.com/, 4. Business management system bgERP: https://bgerp.com/, 5. R.Hrischev, Planning and implementation of the ERP system in packaging production, 2018, Plovdiv, ISSN Online: 2535-0048 .

DESCRIPTION OF THE COURSE

Name of the course: **ERP systems**	Code: **BpIM30.2**	Semester: **8**
Type of teaching: Lectures (L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 15 hours	Number of credits: **4**

LECTURER(S):
Chf. Asst. Prof. Radoslav Hrischev, PhD tel.: 032 659525, e-mail: hrischev@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Compulsory elective subject from the curriculum for training of students to obtain Bachelor's degree, specialty Industrial Management, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: To introduce the basic knowledge of the organization of ERP systems based on a real working system. The course is the first step and prerequisite for additional training and acquisition of specific skills for working with SAP (Systems, Applications & Products in Data Processing ".

DESCRIPTION OF THE COURSE: The main topics include: Overview and description of ERP systems, their place in automation systems, Description of SAP as the number one ERP system in the world, Consideration of the main modules of the system, their relationship and importance, Detailed overview of the most important modules. Practical skills for working with the system based on exercises in demonstration and test systems hosted on servers of universities, members of SAP University Alliances.

PREREQUISITES: Informatics, System Control.

TEACHING METHODS: Lectures, presentations, demonstrations, simulations, laboratory exercises, group work, protocols and defense.

METHOD OF ASSESSMENT: One-hour written assessment - test at the end of the semester (75%), laboratory work (25%) with protocols and defense

INSTRUCTION LANGUAGE: In Bulgarian

BIBLIOGRAPHY: 1. SAP University Alliances, Global Bike (GBI) curricula, 2. SAP University Alliances, Introduction to Industry 4.0, 3.Open Online Courses: https://open.sap.com/.

DESCRIPTION OF THE COURSE

Name of the course: **Computer integrated systems**	Code: **BpIM31**	Semester: **8**
Type of teaching: Lectures (L) Laboratory work (LW)	Hours per semester: L – 30 hours LW – 0 hours	Number of credits: **4**

LECTURER(S):
Chf. Asst. Prof. Radoslav Hrischev, PhD tel.: 032 659525, e-mail: hrischev@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 Industrial Engineering, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: To introduce knowledge about modern computer integrated systems. Students get acquainted with the development of production and information systems. The course acquaints students with the concepts, methods, platforms for integration of management systems.

DESCRIPTION OF THE COURSE: The main topics are: Production systems and prerequisites for integration, strategies and methods of integration, hardware and software platforms for integration, databases and information security in integrated information systems. Industry 4.0 and integrated information systems.

PREREQUISITES: Mathematics, Informatics, Production Management.

TEACHING METHODS: Lectures, presentations, demonstrations, simulations

METHOD OF ASSESSMENT: Written exam - test at the end of the semester.

INSTRUCTION LANGUAGE: In Bulgarian

BIBLIOGRAPHY: 1. Training materials on computer integrated systems (KIPS), 2004, TU Sofia, 3. Lin Zhang at all, 2014, Cloud manufacturing: a new manufacturing paradigm, Enterprise Information Systems, Vol. 8, 167-187. 4. SAP University Alliances, Introduction to Industry 4.0.

DESCRIPTION OF THE COURSE

Name of the course: **Unconventional technologies**	Code: **BpIM32.1**	Semester: **8**
Type of teaching: Lectures (L) Laboratory work (LW)/Seminars (S) Course work (CW)	Hours per semester: L – 20 hours SW – 0 hours LW – 0 hours	Number of credits: **3**

LECTURER(S):
Assoc. Prof. Eng. Angel Lengerov, PhD (FME), tel.: 659 624, e-mail: anlen@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Optional subject from the curriculum for education of students learning Bachelor's degree, specialty Industrial management, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: At the end of the course students are expected to be able to know unconventional materials processing technologies using specific type of energy (electrical, thermal, chemical, electromagnetic). They will acquire skills for designing operations and implementing them in production conditions.

DESCRIPTION OF THE COURSE: The main topics concern: Nature, characteristics and classification of unconventional technologies; Electrical discharge machining; Laser processing; Electron-beam processing; Plasma treatment; Ultrasonic treatment; Magnetic processing; Anodic electrochemical treatment; cathodic electrochemical treatment; Combined technologies.

PREREQUISITES: Physics, Chemistry, Electrical and Electronics.

TEACHING METHODS: Lectures, using slides, case studies, seminars, protocols.

METHOD OF ASSESSMENT: Two one-hour assessments at mid and end of semester (82%), seminars (18%).

INSTRUCTION LANGUAGE: Bulgarian

BIBLIOGRAPHY:
1. Кузманов, Т., Хр. Метев. Електрофизични и електрохимични технологии за обработване в машиностроенето. Габрово, ЕКС-ПРЕС-Габрово, 2009;
2. Кузманов, Т., Хр. Метев, Парашкевов С. Електрофизични и електрохимични технологии в машиностроенето, "ЕКС-ПРЕС" ООД – Габрово, 2005;
3. Кузманов, Т., Хр. Метев. Неконвенционални технологии (ръководство за лабораторни упражнения), "ЕКС-ПРЕС" ООД – Габрово, 2005;
4. Георгиев, А. "Електрофизични и електрохимични технологии в машиностроенето", ТУ – София, 1994;
5. "Справочник по електрохимическим и електрофизическим методам обработки", под ред. Волосатова В. А., Машиностроение, Л., 1988;
6. Dhiwar, H. Optimization of Process Parameters of Electrochemical Machining. International Journal of Engineering and Management Research, ISSN 2394-6962, VOL.7, 2017.

DESCRIPTION OF THE COURSE

Name of the course: **Automated computer design systems**	Code: BpIM32.2	Semester: **8**
Type of teaching: Lectures (L)	Hours per semester: L – 20 hours	Number of credits: 3

LECTURER(S):
As. Eng. Konstantin Chukalov, PhD (FME), tel.: 659 618, e-mail: chukalov@tu-plovdiv.bg
Technical University of Sofia

COURSE STATUS IN THE CURRICULUM: Optional subject from the curriculum for education of students learning Bachelor's degree, specialty Industrial management, Professional orientation 5.13 General Engineering, Field 5 Technical Sciences.

AIMS AND OBJECTIVES OF THE COURSE: Students to expand their knowledge about computer design of parts, machines and automated processes, to create conceptional and functional models of designed parts, to design technological processes.

DESCRIPTION OF THE COURSE: The main topics concern: Stages of computer design, computer design of parts, machines, processes, Analyse and evaluation of during designing, modelling, configurations, library of configurations, parametric optimization, prototyping, computer design systems

PREREQUISITES: Engineering graphics, Machine elements.

TEACHING METHODS: Lectures using laptop and multimedia projector.t

METHOD OF ASSESSMENT: Conducting two tests-at the middle and at the end of the semester (100%).

INSTRUCTION LANGUAGE: български

BIBLIOGRAPHY: 1. Fundamentals of computer design, Plamen Bratanov, Grisha Vasilev, **ISBN:** 978-954-760-291-5, 2013; 2. 3D modelling; Grisha Vasilev, ISB**N:** 978-954-20-0629-9,2014.

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 Vladimdirov, 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_spassov@tu-plovdiv.bg
Technical University of Sofia-Branch Plovdiv

COURSE STATUS IN THE CURRICULUM: Facultative subject from the curriculum for training of students to obtain Bachelor's degree, specialty „Industrial Engineering“, „Design and printed communications“, Professional orientation 5.13 General Engineering, 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. Туризъм и ориентиране. Методическо ръководство за студентите от ТУ София, филиал Пловдив. Издателство на ТУ - София. 2010.