CASIMIR PULASKI RADOM UNIVERSITY

Erasmus+

SYLLABUS

Course title:	**New Engineering Materials**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	2	
Methods:	Lecture/Self-study	
Course topics	The course New Engineering Materials introduces students to advanced materials and innovative fabrication methods shaping modern engineering. It covers nanomaterials and various nanofabrication techniques, highlighting their unique properties and applications. The course explores biomimetic materials and smart materials and systems that emulate natural processes and respond adaptively to environmental stimuli. Students will study materials designed for information storage and transmission, as well as advanced polymer composites and nanocomposites, and carbon-carbon composites with exceptional mechanical properties. Topics also include shape memory alloys, functionally graded materials, and specialized materials for microelectromechanical systems (MEMS) and fuel cells. The course discusses maraging steels, focusing on their processing methods and engineering applications, as well as the emerging technology of 3D metal printing. Environmental considerations related to the production, use, and disposal of new materials are integrated throughout, preparing students to address sustainability challenges in materials engineering.	
Grading policy	Final test – average marks from partial questions	
References	1. E. S. Gevorkyan, M. Rucki, V. P. Nerubatskyi, W. Żurowski, Z. Siemiątkowski, D. Morozow and A. Kharatyan. Remanufacturing and Advanced Machining Processes for New Materials and Components. Taylor&Francis: New York, 2022. https://doi.org/10.1201/9781003218654 (Open Access financed by MEiN) 2. M. Schwartz, New Materials, Processes, and Methods Technology. CRC Press: Boca Raton 2010. 3. Shackelford J.F.: Materials sciences for Engineers. Pearson: Upper Saddle River 2005	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**Mirosław Rucki, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54-B1, p. 310, 26-600 Radom
	E-mail	m.rucki@urad.edu.pl
	phone	(+ 48) 48 361 7697
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

Erasmus+

SYLLABUS

Course title:	**Surface Engineering**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	2	
Methods:	Lecture/~~project/laboratory~~	
Course topics	The course introduces students to the principles, methods, and applications of modifying and enhancing surface properties of materials to improve performance, durability, and resistance to degradation. It begins with an overview of material degradation mechanisms and the importance of maintaining surface integrity in engineering components. Students will explore the role and challenges of surface engineering in modern technology, supported by the application of material science, physics, and chemistry at the solid body surface level. The course covers various surface layers and coatings, including their structure, function, and gradient properties, along with conventional and non-conventional surface treatment techniques such as thermal spraying, PVD, CVD, laser processing, and chemical treatments. Emphasis is also placed on surface engineering strategies for advanced materials and high-performance applications. The course concludes with a discussion of emerging trends and future developments in the field, preparing students to apply surface engineering concepts in diverse industrial contexts.	
Grading policy	Final test – average marks from partial questions	
References	1. A.W. Batchelor, L.N. Lam, M. Chandrasekaran, Materials Degradation and Its Control by Surface Engineering. Imperial College Press: London 2011. 2. R.S. Walia et al. (Eds.), Surface Engineering: Methods and Applications. CRC Press: Boca Raton 2023. 3. K. Gupta, Surface Engineering for Modern Materials. Springer: Cham 2020. 4. M.I. Baraton, I.V. Uvarova, Functional Gradient Materials and Surface Layers Prepared by Fine Particles Technology. Springer: Dordrecht 2001. 5. C.S. Kumar, F.D. Fernandes, Thin-Films for Machining Difficult-to-Cut Materials. CRC Press: Boca Raton 2023.	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**Mirosław Rucki, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54-B1, p. 310, 26-600 Radom
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	phone	(+ 48) 48 361 7697
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Metrology and Measurement Systems**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	2	
Methods:	Lecture/Self-study	
Course topics	The course Metrology and Measurement Systems provides students with essential knowledge and skills related to modern measurement science and its application in engineering. It covers the foundations of measurement theory, including units, standards, and traceability within international systems. Students will explore various measuring methods, tools, and devices used in industrial and laboratory contexts. A key focus is placed on understanding metrological characteristics such as accuracy, resolution, sensitivity, and stability, as well as performing uncertainty estimation in accordance with current standards. The course also includes the analysis and evaluation of industrial measurement systems, emphasizing concepts such as repeatability, reproducibility, and gauge capability (Gage R&R). Through both theoretical instruction and applied exercises, students gain competencies necessary for the selection, validation, and critical assessment of measurement systems in engineering practice.	
Grading policy	Final test – average marks from partial questions	
References	1. W. Nawrocki, Measurement systems and sensors. Artech House: London 2016. 2. S. Mekid, Metrology and Instrumentation. Wiley: 2022. 3. J. Sładek, Coordinate Metrology: Accuracy of Systems and Measurements, Springer: 2016 4. H.A. Wade (Ed.), The ASQ Metrology: Handbook. ASQ excellence: Milwaukee 2022.	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: Mathematics and Physics
Teacher	**Mirosław Rucki, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54-B1, p. 310, 26-600 Radom
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	phone	(+ 48) 48 361 7697
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Strength Of Materials**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	7	
Methods:	Lecture/exercise/laboratory	
Course topics	The course Strength of Materials introduces students to the fundamental principles governing the mechanical behavior of solid bodies under various types of loads. It focuses on two primary goals: first, to explain the core concepts of stress and strain, and second, to develop the ability to analyze and predict the response of structural elements under loading. The course covers topics such as shearing force and bending moments, torsion, and deflection in beams and shafts, providing a solid foundation for understanding how materials deform and fail under different conditions. Through a combination of theoretical instruction and practical problem-solving, students will acquire the skills necessary to evaluate the strength, stiffness, and stability of mechanical components in engineering applications.	
Grading policy	Positive result of the multiple-choice test	
References	1. Timoshenko S.: Strength of Materials, 3rd edition. Krieger Publishing Company, 1976 2. Hibbeler, R.C.: Statics and Mechanics of Materials, SI Edition. Prentice Hall, 2004 3. Mott, Robert L.: Applied Strength of Materials, 4th edition. Prentice Hall, 2002	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: mathematics and mechanics
Teacher	**OLEJARCZYK KRZYSZTOF, Ph.D**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54, room 306
	E-mail	k.olejarczyk@urad.edu.pl
	phone	(+ 48) 48 361 71 16
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Vehicles Diagnostic**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	3	
Methods:	Lecture/exercise/laboratory	
Course topics	The course Vehicle Diagnostics provides students with practical and theoretical knowledge of diagnostic techniques used in modern vehicles, with a focus on internal combustion engine systems and safety-critical components. It covers the principles and applications of European On-Board Diagnostics (EOBD), including reading fault codes, interpreting live data, and using scan tools. Students will learn methods of exhaust gas analysis and how it relates to engine performance and emission control, including the operation and diagnostic testing of catalytic converters and oxygen sensors. The course includes diagnostic procedures for vehicle brake systems, wheel suspension, and wheel geometry measurements, with an emphasis on safety and handling. Diagnostic approaches to key sensors and actuators involved in the fuel and ignition systems are discussed, along with lead–acid battery testing, including capacity, voltage drop, and charge acceptance tests. The course also introduces Common Rail system diagnostics and covers testing strategies for vehicle safety systems, such as ABS, airbags, and stability control. By the end of the course, students will be equipped to identify faults, interpret sensor data, and evaluate the condition of key vehicle systems using professional diagnostic tools.	
Grading policy	Positive result of the multiple-choice test	
References	1. Al Santini: OBD-II: Functions, Monitors and Diagnostic Techniques (online in https://books.google.pl) 2. A. W.M. Bonnick: Vehicle Electric System and fault Diagnosis. (online in https://books.google.pl) 3. C.H. Bartholomew: Catalyst deactivation 1997. (online in https://books.google.pl) 4. K. Reif: Brakes, Brake Control and Driver Assistance Systems. (online in https://books.google.pl)	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**KRZYSZTOF GÓRSKI, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Chrobrego 54, room 50
	E-mail	krzysztof.gorski@urad.edu.pl
	phone	(+ 48) 48 361 76 58
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Biofuels for Internal Combustion Engines**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	3	
Methods:	Lecture/exercise/laboratory	
Course topics	The course Biofuels for Internal Combustion Engines introduces students to the fundamentals of biofuels as renewable energy sources for transportation. It begins with a historical overview of biofuels and their early use in engines, followed by an exploration of biorenewable feedstocks such as plant oils, alcohols (e.g., ethanol, butanol), and ethers. Emphasis is placed on the physicochemical properties of these fuels and their influence on engine performance, combustion behavior, and emissions in both spark-ignition and compression-ignition engines. Students will analyze the benefits and drawbacks of biofuels, including sustainability, environmental impact, and compatibility with existing engine technologies. The course also covers key technologies for biofuel production—mechanical, thermochemical, and biochemical—as well as the fundamental processes of combustion specific to biofuels. Special attention is given to EU policies supporting biofuel adoption, such as the Renewable Energy Directive and CO_2 reduction targets. The course concludes with an overview of current trends in the biofuels market and the development of second- and third-generation fuels, preparing students to assess the role of biofuels in sustainable mobility and energy transitions.	
Grading policy	Positive result of the multiple-choice test	
References	1. IRENA (2019), Advanced biofuels. What holds them back? International Renewable Energy Agency, Abu Dhabi. 2. Ayhan Demirbas. Biofuels. Securing the Planet's Future Energy Needs. Springer 2009. 3. Dwight Tomes, Prakash Lakshmanan, David Songstad. Global Impact on Renewable Energy, Production Agriculture, and Technological Advancements. Springer 2011. 4. Directive 2009/30/EC of the European Parliament. L 140/88 5. Standards: ISO EN 14214, ISO EN 590	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**KRZYSZTOF GÓRSKI, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Chrobrego 54, room 50
	E-mail	krzysztof.gorski@urad.edu.pl
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Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Internal Combustion Engines**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	5	
Methods:	Lecture/exercise/laboratory	
Course topics	The course Internal Combustion Engines introduces students to the fundamental parameters and performance characteristics of internal combustion engines. Key topics include engine power output, mechanical efficiency, mean effective pressure, torque, volumetric efficiency, fuel-air ratio, and specific fuel consumption. Students will study various engine characteristics such as speed, load, and regulation behavior. The course also covers methods for measuring exhaust emissions, including hydrocarbons (HC), methane, non-methane hydrocarbons, carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM). A detailed examination of the combustion process is provided, focusing on cylinder pressure analysis, heat release patterns, and thermal efficiency. Additionally, the heat balance of the engine is discussed to understand energy distribution during operation. The course concludes with an overview of alternative fueling strategies, including dual-fuel operation in compression ignition engines, highlighting advances in engine versatility and environmental performance.	
Grading policy	Positive result of the multiple-choice test	
References	1. A.J. Martyr and M.A. Plint: Engine Testing (Third Edition) Theory and Practice. ISBN: 978-0-7506-8439-2 http://www.sciencedirect.com/science/book/9780750684392 2. John B. Heywood: Internal Combustion Engine Fundamentals 3. Günter P. Merker, Christian Schwarz, Gunnar Stiesch, Frank Otto Simulating Combustion Simulation of combustion and pollutant formation for engine-development ISBN 10 3-540-25161-8 Berlin Heidelberg New York	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**Tomasz Skrzek, PhD**	
	Faculty of Mechanical Engineering	
	Location	ul. Chrobrego 54, room 113
	E-mail	t.skrzek@urad.edu.pl
	phone	(+ 48) 48 361 76 58
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Databases**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	5	
Methods:	Seminar/Project/Self-study	
Course topics	The course Databases introduces students to fundamental concepts and techniques for designing, implementing, and managing databases. It covers core data modeling approaches including the object-oriented model and the entity-relationship (ER) model, which provide frameworks for representing real-world information. Students will study the relational data model, the foundation of most modern database systems, and learn how to organize data into tables with defined relationships. The course offers a practical introduction to SQL (Structured Query Language), focusing on both data definition (creating and modifying database structures) and data manipulation (querying, inserting, updating, and deleting data). Additionally, students will gain experience in developing database applications, applying theoretical knowledge to real-world problems through a database design project that integrates modeling, implementation, and testing.	
Grading policy	Positive result of the multiple-choice test and positive result of project	
References	1. Hektor Garcia-Molina, Jeffrey D. Ullman, Jennifer D. Widom, Database Systems: The Complete Book. Prentice Hall. 2. Narayan Umanath, Richard Scamell, Data Modeling and Database Design. Delmar. 3. Gavin Powell, Beginning Database Design. Wiley. 4. Paul Wilton, John Colby, Beginning SQL. Wiley. 5. Peter Rob, Carlos Coronel, Database Systems: Design, Implementation, and Management, Seventh Edition. Course Technology.	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: mathematics
Teacher	**Michał PAJĄK, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54, room 118
	E-mail	m.pajak@urad.edu.pl
	phone	(+ 48) 48 361 71 49
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Theory of Operation and Maintenance of Technical Systems**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	3	
Methods:	Seminar/ Self-study	
Course topics	The course Theory of Operation and Maintenance of Technical Systems provides a comprehensive overview of the life cycle phases of machinery, emphasizing the operation and maintenance stages. It introduces the fundamental concepts of systems theory as applied to technical objects, focusing on the controlled processes that govern machine performance during operation and upkeep. Students will explore different types of wear, including tribological (friction-related) and non-tribological wear, and their impact on the longevity and reliability of equipment. The course also covers key concepts such as operational potential and the operational position of technical systems within their working environment. Additionally, various operation and maintenance strategies are analyzed to optimize system availability, safety, and cost-effectiveness. Through theoretical knowledge and practical examples, students will develop the skills necessary to manage and improve the lifecycle performance of complex technical systems.	
Grading policy	Positive result of the multiple-choice test	
References	1. Lindley R. Higgins, R. Keith Mobley, Maintenance Engineering Handbook, Seventh Edition. 2. Donella Meadow, Thinking in Systems. Chelsea Green Publishing. 3. http://www.corrosion-doctors.org/modules 4. Mehadaven B., Operation Management Theory and Practice. Pearson.	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**Michał PAJĄK, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54, room 118
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Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Fundamentals of Technical Thermodynamics**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	6	
Methods:	Lectures / Seminars / Laboratories / Self-study	
Course topics	The course Fundamentals of Technical Thermodynamics provides students with a solid foundation in the basic principles and laws governing thermodynamic systems. It begins with essential concepts such as thermodynamic states, the Zeroth Law, and thermal equations of state, progressing to the First Law of Thermodynamics covering energy conservation, mechanical work, heat transfer, and energy balances in systems and flows. The course introduces the Second Law of Thermodynamics, focusing on irreversibility, entropy, and the entropy increase principle, with practical applications in heat engines and exergy analysis. Students will study key thermodynamic processes including isochoric, isothermal (with verification of Boyle-Mariotte's law), isobaric, and cycles involving ideal gases and humid air relevant to air conditioning. Experimental topics include viscosity measurement, high-pressure techniques, calibration of manometers, thermocouples, and resistance thermometers, as well as determination of flash points and moisture content in solid fuels. Through theoretical and laboratory exercises, students will develop competencies in analyzing and applying thermodynamic principles to real engineering problems.	
Grading policy	Positive result of the examination	
References	1. Thermodynamics: An Engineering Approach by YunusCengel, Michael Boles, McGraw-Hill Education, 2014 2. Fundamentals of Engineering Thermodynamics by Michael J. Moran, Howard N. Shapiro, Daisie D. Boettner, Margaret B. Bailey, Wiley, 2018 3. Thermodynamics For Dummies by Mike Pauken, For Dummies, 2011 4. Refrigeration and Air Conditioning: An Introduction to HVAC by AHRI, Larry Jeffus, Prentice Hall, 2004	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: Physics
Teacher	**Michał PAJĄK, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54, room 118
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Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Engineering application of the artificial intelligence techniques**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	6	
Methods:	Lectures / Seminars / Laboratories / Self-study	
Course topics	The course Engineering Application of Artificial Intelligence Techniques introduces students to advanced AI methods applied in engineering problem-solving. It begins with fuzzy logic, covering fundamental concepts such as fuzzy sets, fuzzy relations, fuzzy rules, and operations, as well as the design and implementation of fuzzy systems, modeling, and controllers. The course then explores genetic algorithms, explaining key elements like genes, chromosomes, crossover, mutation, and selection processes, alongside their role in optimization and engineering applications. Students will also learn about multi-objective analysis and decision-making techniques that integrate these AI tools to handle complex engineering challenges. The course culminates in a practical project where students design and develop an engineering system combining genetic algorithms and fuzzy logic, applying theoretical knowledge to real-world scenarios.	
Grading policy	Positive result of the examination and positive result of project	
References	1. Fuzzy Logic For Beginners by Masao Mukaidono, World Scientific, 2001 2. New Frontier in Evolutionary Algorithms: Theory and Applications 1st Edition by Hitoshi Iba, Nasimul Noman, Imperial College Press, 2011 3. Artificial Intelligence: The Basics 1st Edition by Kevin Warwick, Routledge, 2011	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**Michał PAJĄK, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Stasieckiego 54, room 118
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	phone	(+ 48) 48 361 71 49
Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**English**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	2	
Methods:	Lectures / Self-study	
Course topics	Grammatical tenses (present simple, present continuous, static and dynamic verbs), present perfect, past simple gradation of adjectives, past tenses (past perfect, past perfect continuous), passive voice, 'gerund & infinitive' form reported speech. Thematic and lexical issues: describing family, people's character traits, personality, travel, means of transport, trips, money and ways of paying, education at various levels dream houses, office work, product advertising technology gadgets, technology addiction and protection against it. Definite and indefinite articles. Written form – informal letter, article Thematic and lexical issues, skills and capabilities; how to learn a language? Written forms: short story, film review.	
Grading policy	Positive result of the examination and positive result of project	
References	1. English File Intermediate, Student's book, Oxford University Press, 2018 2. English File Intermediate, Workbook, Oxford University Press, 2018 3. English File Inetrmediate, Teacher's book, Oxford University Press, 2018 4. Digi book (online version) 7. Virginia, Evans, FCE USE of English, Express Publishing, 1998 8. Jolanta Pasternak-Winiarska, Maria Teodorowicz, Technical English for Students of Mechanical Faculties, Oficyna Wydawnicza Politechniki Warszawskiej, 2008 9. Nick, Brieger, Alison, Pohl, Technical English – Vocabulary and Grammar, Summertown Publishing, 2002 10. Ivor, Williams, English for Science and Engineering, Thompson, 2007 11. Virginia Evans, Jenny Dooley, Carl Taylor, Career Paths, Electronics, Express Publishing 2012	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**Małgorzata Tatar**	
	Faculty of Mechanical Engineering	
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Tuition fees	do not apply for EU/EEA citizens or exchange students	

CASIMIR PULASKI RADOM UNIVERSITY

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SYLLABUS

Course title:	**Vehicle Operation and Maintenance**	
Semester (year)	Autumn/Spring (2026/2027)	
Study level	Bachelor	
ECTS Credits	5	
Methods:	Lecture/laboratory/Self-study	
Course topics	The course Vehicle Operation and Maintenance provides a comprehensive introduction to the principles, methods, and practical aspects of the operation and maintenance of technical systems, with a particular emphasis on machines and complex mechanical equipment. Students will become familiar with key definitions and concepts in the field of machinery exploitation, including physical wear mechanisms, failure modes, limit states, and legal requirements for technical object usage. The course covers various sources of information about the condition and reliability of machines, diagnostic approaches, and introduces vehicles as a representative example of complex technical systems. Special attention is given to the methodology of operational research, maintenance strategies, and life-cycle considerations applicable to a wide range of machinery across industries. Students will study the course outline, assessment criteria (which may include written exams, project work and case studies), and recommended literature, including technical standards and scientific resources. Upon completion, students will gain practical and theoretical competencies applicable to maintenance engineering, reliability analysis, and technical diagnostics in industrial and transport environments.	
Grading policy	Positive result of the multiple-choice test	
References	1. https://funaab.edu.ng/wp-content/uploads/2009/12/470_MCE%20509%20LECTURE%20NOTE.pdf 2. R. Keith Mobley. Maintenance Engineering Handbook, 8th Edition. 2014 McGraw-Hill Education 3. https://ia903204.us.archive.org/23/items/in.ernet.dli.2015.140439/2015.140439.Mechanical-Fault-Diagnosis_text.pdf 4. Joel Levitt. Handbook of Maintenance Management. Transatlantic Publishers 2009	
Prerequisites	Obligatory	English, CEFR level B2 or higher
	Recommended	Completed courses on: NA
Teacher	**KRZYSZTOF GÓRSKI, Associate Professor**	
	Faculty of Mechanical Engineering	
	Location	ul. Chrobrego 54, room 50
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Tuition fees	do not apply for EU/EEA citizens or exchange students	