

### III SĒJUMS SATURS CONTENTS

#### *Education in Engineering Sciences*

<b>Sergey Arakelov, Shaxnoza Raximova</b> INFORMATION AND ANALYTICAL COMPETENCES IN THE PROCESSES OF INTELLECTUAL TRANSFORMATION OF TRAINING OF INFORMATION AND LIBRARY SPECIALISTS	15
<b>Andreas Ahrens, Jelena Zascerinska, Julija Melnikova, Parulkumari P. Bhati, Anastasija Bikova, Mihails Zascerinskis</b> EXAMINING ONLINE PLATFORMS OF STEM CENTRES FOR UPPING OUTDOOR STEM EDUCATION IN LATVIA	25
<b>Dace Brizga, Baiba Jansone, Uldis Karlsons, Elīza Hermane</b> ASPECTS OF COGNITIVE ERGONOMICS IN FORESTRY ENGINEERING EDUCATION	33
<b>Oksana Bulgakova, Inna Savytska, Lesya Zbaravska, Adolfs Rucins, Aivars Aboltins, Andrii Sikora, Valentina Vasileva</b> EDUCATIONAL CONDITIONS FOR FORMATION OF SPECIAL COMPETENCE OF THE FUTURE SPECIALISTS IN AGRICULTURAL ENGINEERING	41
<b>Oksana Bulgakova, Inna Savytska, Lesya Zbaravska, Ādolfs Ruciņš, Aivars Aboltins, Oleksandr Shutyak, Valentina Vasileva</b> MODERN APPROACHES AND FACTORS, CONTRIBUTING TO THE FORMATION OF PROFESSIONAL COMPETENCE OF AN AGRICULTURAL ENGINEER IN THE SPHERE OF LIFE SAFETY	49
<b>Oksana Bulgakova, Inna Savytska, Lesya Zbaravska, Ādolfs Ruciņš, Aivars Aboltins, Valentina Vasileva</b> A SYSTEM OF PEDAGOGICAL SUPPORT FOR THE IMPLEMENTATION OF AN ACTIVITY-BASED APPROACH IN THE TRAINING OF COMPETENT ENGINEERS	55
<b>Ildze Čakāne, Ilze France, Astrida Cirulis</b> READJUSTING FOR DIGITAL TRANSFORMATION: A PRIMARY MATHEMATICS FRAMEWORK	61
<b>Olha Chaikovska, Olga Stoliarenko, Liudmyla Komarnytska, Maryna Voloshchuk</b> WEBQUESTS AS A TOOL FOR DEVELOPING THE PROFESSIONAL COMMUNICATION SKILLS OF FUTURE SOFTWARE ENGINEERS IN AN INCLUSIVE EDUCATIONAL ENVIRONMENT	69
<b>Vihra Dimitrova</b> MODEL OF SUCCESSFUL DIGITAL TRANSFORMATION OF HIGHER EDUCATION INSTITUTIONS	75
<b>Vihra Dimitrova</b> ANALYSIS OF THE MAIN FACTORS FOR THE DIGITALIZATION OF HIGHER EDUCATION	83

<b>Natalia Dmitrenko, Tetiana Fedyk, Nataliia Franchuk, Iryna Shakhina, Olena Podzygun</b> LEVERAGING CHATGPT TO DEVELOP CRITICAL THINKING THROUGH MATHEMATICAL PROBLEM-SOLVING IN ESP CLASSES	<b>91</b>
<b>Natalia Dmitrenko, Olena Podzygun, Tetiana Fedyk</b> USE OF COMICS IN ENHANCING SPEAKING INTERACTION SKILLS OF PROSPECTIVE ENGINEERS IN ESP CLASSROOM	<b>99</b>
<b>Natalia Dmitrenko, Iryna Shkola, Oksana Dubrova, Inna Lobachuk, Olena Malinka</b> ENGINEERING STUDENTS' ENGLISH PROFICIENCY DEVELOPMENT THROUGH AR TECHNOLOGIES	<b>105</b>
<b>Edvins Evarts</b> HISTORY AT SCHOOL – A PREREQUISITE FOR UNDERSTANDING ENGINEERING	<b>111</b>
<b>Imants Gorbāns</b> REMOTE STUDY WORK CHALLENGES AND THE NEW MODEL IN POST-COVID AND PRE-AI ERA	<b>117</b>
<b>Tzvetelin Gueorguiev</b> AUDITING EDUCATIONAL QUALITY MANAGEMENT SYSTEMS - NOW AND IN THE NEAR FUTURE	<b>123</b>
<b>Lyuba Gyurova, Cvetelina Velkova</b> IMPROVING EDUCATION FOR FUTURE MARINE ELECTROMECHANICS THROUGH EXPERIMENTAL ANALYSIS OF HYDROSTATIC PRESSURE IN LIQUIDS USING THE HM 150.05 EXPERIMENTAL UNIT	<b>129</b>
<b>Andrejs Geske, Rita Kiseļova, Olga Pole</b> ACHIEVING EXCELLENCE IN COMPUTATIONAL THINKING: INSIGHTS FROM THE ICILS 2023 STUDY	<b>135</b>
<b>Anatolii Ivanchuk, Stanislav Podolyanchuk, Oksana Marushchak</b> FEATURE OF ENGINEERING TRAINING FOR FUTURE TECHNOLOGY TEACHERS	<b>145</b>
<b>Renata Kondratavičienė, Inga Bertašienė</b> ASSESSING COGNITIVE AND CREATIVITY COMPETENCES IN PRE-PRIMARY CHILDREN BASED ON LANGUAGE EDUCATION ACHIEVEMENTS	<b>151</b>
<b>Neli Kalcheva, Maya Todorova, Ginka Marinova, Firgan Feradov</b> TEACHING LINEAR REGRESSION WITH PYTHON AND EXCEL: METHODS, TOOLS, AND PRACTICAL TASKS	<b>163</b>
<b>Liubov Khomenko, Lesia Matviienko, Serhii Kashuba, Bohdana Saliuk</b> THE POTENTIAL OF SKETCHFAB IN VISUALIZING TECHNICAL PROCESSES IN THE EDUCATIONAL ENVIRONMENT	<b>169</b>
<b>Renata Kondratavičienė</b> DEVELOPING CRITICAL THINKING IN MATHEMATICS LESSONS FOR FOURTH GRADERS	<b>177</b>

<b>Vasyl Kovalchuk, Svitlana Reva, Iryna Volch, Svitlana Shcherbyna, Halyna Mykhailyshyn, Tetiana Lychova</b>	<b>187</b>
ARTIFICIAL INTELLIGENCE AS AN EFFECTIVE TOOL FOR PERSONALIZED LEARNING IN MODERN EDUCATION	
<b>Vasyl Kovalchuk, Andrii Kovalchuk, Bohdan Vovk, Oleksandr Derevyanchuk, Oleksandr Rozhkov</b>	<b>195</b>
MODEL OF DIGITALIZATION PROFESSIONAL TRAINING OF FUTURE VOCATIONAL EDUCATION TEACHERS	
<b>Vitalii Kyslitsyn, Liudmyla Liubarska, Anatolii Ostapovets, Volodymyr Umanets, Yuriy Babchuk</b>	<b>203</b>
FEATURES OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE FORMATION OF CREATIVITY IN THE PROFESSIONAL TRAINING OF TEACHERS	
<b>Oleksandr Malykhin, Nataliia Aristova, Liudmyla Dybkova</b>	<b>213</b>
USING AI TOOLS FOR PERSONALISING LEARNING IN THE ENGLISH LANGUAGE CLASSROOM: COMPUTER SCIENCE UNDERGRADUATE STUDENTS' PERCEPTIONS	
<b>Oleksandr Malykhin, Nataliia Aristova, Liudmyla Dybkova</b>	<b>219</b>
DEVELOPING COMPUTER SCIENCE UNDERGRADUATE STUDENTS' COMMUNICATIVE AND SELF-EXPRESSION SKILLS: DIGITAL VS. TRADITIONAL STORYTELLING METHODS	
<b>Julija Melnikova, Aleksandra Batuchina, Jelena Zascerinska, Andreas Ahrens, Kamilè Kesylè</b>	<b>225</b>
CREATING A PROFESSIONAL DEVELOPMENT PROGRAM TO ENHANCE GENERAL EDUCATION TEACHERS' SKILLS IN APPLYING DIGITAL LEARNING PLATFORMS FOR TEACHING AND LEARNING	
<b>Vida Navickienė, Birutė Juodagalvienė</b>	<b>233</b>
POSSIBILITIES OF DEVELOPING CREATIVITY THROUGH THE STUDY SUBJECT OF GEOMETRIC MODELLING: STUDENTS' POINT OF VIEW	
<b>Līga Ramāna, Ingrīda Veilande</b>	<b>239</b>
REFLEXION – A NECESSARY STEP IN THE PROCESS OF SOLVING MATHEMATICS PROBLEMS	
<b>Karin Robam, Tony Hand, Sander Kanter, Erik Väli</b>	<b>247</b>
ENHANCING MINING EDUCATION: INTEGRATING ONLINE LEARNING AND HANDS-ON EXPERIENCE FOR COMPREHENSIVE SKILL DEVELOPMENT	
<b>Bohdan Rozputnia, Liudmyla Shevchenko, Volodymyr Umanets, Serhii Yashchuk, Yuliia Sabadosh</b>	<b>253</b>
ARTIFICIAL INTELLIGENCE AS A SUPPORT TOOL IN TEACHING PROGRAMMING TO FUTURE BACHELOR'S STUDENTS OF VOCATIONAL EDUCATION	
<b>Olha Rymar, Ivanna Bodnar, Nataliia Sorokolit, Olena Khanikiants, Volodymyr Rykhal</b>	<b>261</b>
THE IMPACT OF GAME-BASED TECHNOLOGIES ON THE DEVELOPMENT OF ATTENTION IN YOUNGER SCHOOL-AGE CHILDREN	
<b>Iryna Shkola, Natalia Dmitrenko, Olena Kondratieva, Iryna Shymanovych, Andrii Moroz</b>	<b>269</b>
GAMIFICATION METHODS FOR DEVELOPING LEXICAL COMPETENCE OF ENGINEERING STUDENTS	

<b>Inna Savytska, Oksana Bulgakova, Lesya Zbaravska, Ādolfs Ruciņš, Aivars Aboltins, Mykhailo Torchuk, Valentina Vasileva</b>	<b>277</b>
APPLICATION OF THE EDUCATIONAL INFORMATION SYSTEMS IN PROFESSIONAL TRAINING OF AGRICULTURAL ENGINEERS STUDYING PHYSICS	
<b>Inna Savytska, Oksana Bulgakova, Lesya Zbaravska, Ādolfs Ruciņš, Aivars Aboltins, Iryna Mushenyk, Valentina Vasileva, Valentyna Kulenko</b>	<b>283</b>
APPLICATION OF ARTIFICIAL INTELLIGENCE TO AUTOMATICALLY VERIFY STUDENT CALCULATIONS IN HIGHER EDUCATION INSTITUTIONS	
<b>Inna Savytska, Oksana Bulgakova, Lesya Zbaravska, Ādolfs Ruciņš, Aivars Aboltins, Mykhailo Torchuk, Valentina Vasileva, Valentyna Kulenko</b>	<b>289</b>
INNOVATIVE TECHNOLOGIES IN TEACHING THEORETICAL MECHANICS FOR AGRI-ENGINEERS	
<b>Nataliia Saienko, Olena Chevycheova, Inna Ivanova, Anastasiia Ptushka, Svitlana Vorobiova</b>	<b>295</b>
THE USE OF DIGITAL TECHNOLOGIES IN TEACHING CULTURE AND FOREIGN LANGUAGES TO TECHNICAL UNIVERSITY STUDENTS	
<b>Sigita Saulėnienė, Aurėja Šarkauskaitė, Agnė Gintaraitė</b>	<b>303</b>
DEVELOPMENT OF INFORMATION TECHNOLOGY COMPETENCE IN PRE-SCHOOL AND PRE-PRIMARY SCHOOL TEACHERS DURING THE EDUCATION PROCESS	
<b>Oleksandra Shykyrynska, Natalia Pakhalchuk, Kateryna Kolesnik, Tetiana Kryvosheya, Inna Karuk</b>	<b>311</b>
PREPARING STUDENTS TO USE VIRTUAL TRAVEL TO DEVELOP PRESCHOOLERS' COGNITIVE INTEREST	
<b>Oleksandra Shykyrynska, Valentyna Liapunova, Olha Melnykova, Kateryna Mnyshenko, Tetiana Petryshyna</b>	<b>319</b>
TRAINING OF FUTURE SPECIALISTS FOR THE FORMATION OF THE FOUNDATIONS OF MEDIA LITERACY OF CHILDREN OF PRESCHOOL AND PRIMARY SCHOOL AGE	
<b>Oleksandra Shykyrynska, Liudmyla Ishchenko, Olha Riaboshapka, Viktoriia Kanska, Tetiana Zhuravko</b>	<b>325</b>
ADVANTAGES AND DISADVANTAGES OF DISTANCE LEARNING IN UKRAINIAN HIGHER EDUCATION INSTITUTIONS UNDER MARTIAL LAW	
<b>Nataliia Sorokolit, Ivanna Bodnar, Olha Rymar, Uliana Shevtsiv, Olha Shymanova-Stefanyshyn</b>	<b>329</b>
DIGITAL APPLICATIONS IN PHYSICAL EDUCATION: EXPERIENCE, BENEFITS, AND IMPLEMENTATION CHALLENGES	
<b>Feruzha Umaralieva, Barno Ganieva, Nadira Usmanova, Jorakhonova Khadicha</b>	<b>337</b>
METHODS OF FORMING ELECTRONIC RESOURCE COLLECTIONS OF ACADEMIC LIBRARIES IN A DIGITAL EDUCATIONAL ENVIRONMENT, CRITERIA FOR SELECTING ELECTRONIC RESOURCES	
<b>Nadira Usmanova, Barno Ganieva, Feruzha Umaralieva, Jorakhonova Khadicha</b>	<b>343</b>
BASICS OF MEDIA LITERACY FORMATION FOR LIBRARY SPECIALISTS	

<b>Nataliia Vinnikova, Larysa Bondarenko, Anastasiia Karpenko, Iryna Mankovska</b> CHATGPT IN EDUCATIONAL AND SCIENTIFIC ACTIVITIES OF GRINCHENKO UNIVERSITY: A DIAGNOSTIC SECTION	<b>349</b>
<b>Iлона Valantinaitė, Vaida Asakavičiūtė, Živilė Sederevičiūtė-Pačiauskienė</b> FACTORS DETERMINING STUDENTS ACTIVITY IN VIRTUAL DISCUSSION	<b>361</b>
<b>Cvetelina Velkova</b> INTEGRATED LEARNING OF LAMINAR BOUNDARY LAYER MODELING ON FLAT PLATES USING ANSYS WORKBENCH FOR SHIP MACHINERY MECHANICS AND MECHATRONICS SPECIALISTS)	<b>369</b>
<b>Lenina Zadorozhna-Kniahnytska, Oksana Goliuk, Olha Hroshovenko, Larysa Prysiashniuk, Iryna Khadzhynova</b> USAGE OF AN INTERACTIVE ELECTRONIC TEXTBOOK APPLICATION: REFLECTION OF UKRAINIAN EXPERIENCE (BASED ON THE INTEGRATED COURSE “HEALTH, SAFETY, AND WELL-BEING”)	<b>375</b>
<b>Alisa Zakharina, Ievgeniia Zakharina, Nataliia Sorokolit, Iryna Hrybovska, Nataliia Stefanyshyn</b> MULTIMEDIA TECHNOLOGIES IN THE TRAINING OF STUDENTS OF HIGHER EDUCATION INSTITUTIONS IN UKRAINE FOR ANIMATION ACTIVITIES IN THE RECREATION AND WELLNESS SECTOR	<b>383</b>
<b>Iryna Zavadska, Anatolii Skrypnyk, Oksana Palyliulko, Oleksandr Shevchuk, Artur Mykhailyk</b> INTEGRATING HISTORY AND SOFTWARE ENGINEERING: A STEM-BASED APPROACH TO TEACHING	<b>391</b>
<b>Wei Zhang, Dzintra Ilisko</b> AI FOR ENHANCING ENGLISH LESSON DESIGN AND PEDAGOGY IN CHINESE MIDDLE SCHOOLS	<b>397</b>