| Srpski (HOME) | English (HOME) |
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| HOME  PARTNERI  RADNI PAKET  E-PLATFORMA  PROJEKTNA DOKUMENTACIJA  GALERIJA  KONTAKT  ZAŠTO GREENES?  Digitalizacija u sektoru obnovljivih izvora energije igra ključnu ulogu u optimizaciji, praćenju i upravljanju obnovljivim izvorima energije. Razvojem seta potrebnih kompetencija u okviru programa zaštite životne sredine, pojačaće se kvalitet i raznovrsnost stručnog kadra koji može da odgovori znanjem na iza zove klimatskih promena i aktuelne energetske krize.  OBLASTI DIGITALIZACIJE  ASPEKT DIGITALIZACIJE  Digitalizacija je noseći faktor GREENES projekta i provlači se kroz programske sadržaje, inovacije u nastavnom procesu, razvoja virtuelnog centra razmene iskustva znanja i primera dobre prakse u formi interaktivne platforme, kurseva celo životnog učenja LLL, pa do diseminacionih metoda i mehanizam sprovođenja kampanja daje priliku partnerima kao i svim ciljnim grupama da jačaju svoje kapacitete na polju digitalizacije, kako personalne (studenti, nastavnici, profesionalci), tako i institucione (digitalizacija procedura, digitalizacija komunikacije, i društva kao celine)  NOVE KOMPETENCIJE  Unapređenjem postojeće kompetencije studenata na master studijama iz oblasti zaštite životne sredine, realizovaće se elementima digitalizacije energetskog sektora, kroz primenu IKT tehnologija poput block chaina, IOT, AI VR, i sl. kreiraće se stručnjaci spremni na aktuelne izazove i potrebe energetskog sektora. Na taj način, učiniće se prvi korak u podizanju kapaciteta ustanova, i privrede u oblasti jačanja i uštede energije, podizanju stepena energetske efikasnosti, kao i energetske tranzicije u smislu prelaska na različite vidove obnovljivih izvore energije (biomasa, spalionice) i pružiće se odgovarajući doprinos smanjenju energetske zavisnosti sve tri zemlje od uvoza energenata.  OBNOVLJIVI RESURSI  obnovljivi izvori energije  energija biomase  Digitalizacija unapređuje proizvodnju energije iz biomase, povećava efikasnost i smanjuje negativne uticaje na okolinu. Korišćenje digitalnih tehnologija pruža mogućnost za širenje i veću integraciju biomase u energetski miks, doprinoseći održivom energetskom sektoru i smanjenju emisije štetnih gasova.  GEOTERMALNA energija  Digitalizacija omogućava stalno praćenje parametara geotermalnih bušotina, uključujući temperaturu, pritisak i protok fluida. Ovi podaci omogućavaju bolje upravljanje i optimizaciju rada bušotina, povećavajući proizvodnju energije i smanjujući troškove održavanja.  HIDROENERGIJA  Digitalizacije pruža mogućnost za unapređenje performansi, efikasnosti i pouzdanosti hidroenergetskih sistema. Ova integracija doprinosi održivom i stabilnom snabdevanju električnom energijom, uz smanjenje negativnih uticaja na okolinu.  SOLARNI IZVORI  Digitalni senzori omogućavaju stalno praćenje proizvodnje električne energije foto naponskih panela u realnom vremenu. To omogućava precizno praćenje performansi panela i identifikaciju problema ili gubitaka u proizvodnji. Na osnovu ovih podataka, moguće je optimizovati postavke sistema kako bi se povećala efikasnost i iskoristivost solarnih panela i odrediti nivo uticaja na zaštitu životne sredine.  VETROGENERATORI  Integracija vetroelektrana u pametne mreže (Smart Grids) omogućava bolje upravljanje i integraciju sa drugim izvorima energije. Ovo omogućava balansiranje ponude i potražnje energije u mreži, smanjenje gubitaka i poboljšanje stabilnosti mreže.  ENERGIJA VODONIKA  Digitalne tehnologije omogućavaju bolje upravljanje procesima proizvodnje vodonika, bilo putem elektrolize, reakcije metana sa parom (reformacija), ili drugih metoda. Ove tehnologije omogućavaju precizno praćenje parametara procesa i optimizaciju proizvodnje kako bi se povećala efikasnost i smanjili troškovi.  NAŠI PARTNERI | HOME  PARTNERS  WORK PACKAGE  E-PLATFORM  PROJECT DOCUMENTATION  GALLERY  CONTACT  WHY GREENES?  Digitalization in the renewable energy sector plays a key role in the optimization, monitoring, and management of renewable energy sources. By developing a set of necessary competencies within the environmental program, the quality and diversity of professional staff who can respond with knowledge behind the calls of climate change and the current energy crisis will be strengthened.  AREAS OF DIGITIZATION  ASPECT OF DIGITIZATION  Digitalization is the bearing factor of the GREENES project and runs through program content, innovations in the teaching process, development of a virtual center of exchange of knowledge experiences and examples of good practice in the form of an interactive platform, lifelong learning courses LLL, to dissemination methods and campaign implementation mechanism gives the opportunity to partners as well as all target groups to strengthen their capacities in the field of digitization, both personal (students, teachers, professionals) and institutional (digitization of procedures, digitization of communication, and society as a whole)  NEW COMPETENCIES  By improving the existing competences of students in master studies in the field of environmental protection, the elements of digitalization of the energy sector will be realized, through the application of ICT technologies such as block chain, IOT, AI VR, etc. Experts will be created ready for the current challenges and needs of the energy sector. In this way, the first step will be made in raising the capacity of institutions, and the economy in the field of strengthening and saving energy, raising the level of energy efficiency, as well as energy transition in terms of transition to various forms of renewable energy sources (biomass, incinerators) and will provide an appropriate contribution to reducing the energy dependence of all three countries on energy imports.  RENEWABLE RESOURCES  renewable energy sources  biomass energy  Digitalization improves energy production from biomass, increases efficiency and reduces negative environmental impacts. The use of digital technologies provides an opportunity for the expansion and greater integration of biomass into the energy mix, contributing to a sustainable energy sector and reducing greenhouse gas emissions.  GEOTHERMAL ENERGY  Digitalization enables constant monitoring of the parameters of geothermal wells, including temperature, pressure, and fluid flow. This data enables better management and optimization of well operation, increasing energy production and reducing maintenance costs.  HYDROPOWER  Digitalization provides an opportunity to improve the performance, efficiency, and reliability of hydropower systems. This integration contributes to a sustainable and stable electricity supply, while reducing negative environmental impacts.  SOLAR SOURCES  Digital sensors allow constant monitoring of the electricity production of photovoltaic panels in real time. This allows precise monitoring of panel performance and identification of problems or losses in production. Based on these data, it is possible to optimize system settings to increase the efficiency and utilization of solar panels and determine the level of impact on environmental protection.  WIND TURBINES  The integration of wind farms into smart grids enables better management and integration with other energy sources. This enables balancing energy supply and demand in the grid, reducing losses and improving grid stability.  HYDROGEN ENERGY  Digital technologies enable better management of hydrogen production processes, whether through electrolysis, methane-steam reaction (reformation), or other methods. These technologies allow precise monitoring of process parameters and optimization of production to increase efficiency and reduce costs.  OUR PARTNERS |

| Srpski (Radni paket) | English (Work Package) |
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| PROJECT MANAGEMENT  Osnovni dokumenti koji će regulisati ovu oblast biće PMP – Project management procedures sa planom upravljanja budžetom i QAP- Quality assurance of project results. U okviru ovih dokumenta, biće detaljno opisane nadležnosti, kanali komunikacije i razrađeni mehanizmi praćenja realizacije aktivnosti kao i ocena kvalitet realizovanog. U cilju efikasnog upravljanja projektom, formiraće se dva nezavisna tela: upravljačko telo – PM tim i telo za kontrolu kvaliteta – PQAP tim. U nadležnosti PM tima, biće realizacija svih projektnih aktivnosti u skladu sa predviđenom agendom, dok će u nadležnosti PQAP tima biti evaluacija realizovanih aktivnosti i postignutih rezultata, kao i prevencija potencijalnih rizika. PM tim će biti zadužen za strateško upravljanje projektom i obezbediće da projekat napreduje u skladu sa planom rada. Ova dva tima sastojaće se od predstavnika PC, P1-P5 partnera, s tim što članovi jednog tima neće moći da budu članovi drugog tima. Na taj način obezbediće se nezavisno ocenjivanje i evolucija urađenog. Radiće se redovni izveštaji o napretku realizacije projekta i izveštaji o postignutim rezultatima. Izveštavanje će biti periodično na svaka dva meseca, putem on line kanala za komunikaciju. Izveštaji o toku aktivnosti biće razmatrani na sastancima PM tima (svaka dva meseca – on line), dok će izveštaji o postignutim rezultatima biti razmatrani na sastancima PM tima i PQAP tima na sastancima koji će se održati u organizaciji partnera C, P1 i P2. Važan element praćenje toka realizacije biće transparentnost u izveštavanju i promociji rezultata. Taj efekat imaće institucionalnu, nacionalnu, i regionalnu dimenziju.  PMP tim:  PC.- Prof. Aleksandra Boričić –  predsedavajući  P1. – Prof. Filip Kokalj  P2 .- Prof Stojanče Nusev  P3. – Miljana Šćekić  P4. -Ivan Angelin  P5. -Boris Novak  PQAP tim biće sastavljen od:  PC. Prof. Boban Cvetanović  P1. -Prof. Niko Samec  P2. -Prof. Mitko Kostov –  Predsedavajući  P3. -Ljljana Kostić Destopović  P4. -Angelina Petrovska  P5. -Ljubo Germič.  Za radne pakete biće nadležne  sledeće osobe:  WP1- Prof. Alakesandra Boričić-PC  WP2. Prof. Filip Kokalj- P1  WP3. Prof. Gordana Janevska  WP4. Prof. Dejan Blagojević-PC  PRIPREMNO RAZVOJNI PAKET  Ovaj radni paket obuhvata preliminarne aktivnosti neophodne za razvoj i unapređenje stanja u okviru osam predmeta, na sve tri ustanove PC (Regulative, Energetski potencijal otpada, Senzorski sistemi), P1 (Sagorevanje i ekologija, Energija i životna sredina, Materijalna i energetska upotreba otpada) P2 (Savremene proizvodne tehnologije I Savremena hidroenergetska postrojenja). To će rezultirati integrisanim podacima o svim studijskim programima, njihovim ciljevima sa predlogom promena u oblasti zelenih energija a na bazi aktuelnih direktiva i zahteva tržišta sa jedne strane, kao i postojećim kapacitetima (infrastruktura, objekti, laboratorije, radna snaga itd.) u oblasti u sve tri zemlje. Rezultati ovih aktivnosti biće usaglašeni i objavljeni u nekoliko izveštaja. Zelena znanja, veštine i kompetencije koje su potrebne diplomcima, postdiplomcima i sadašnjim zaposlenima biće definisane kroz saradnju sa partnerima iz privrede i uskladiće se sa njihovim potrebama i iskustvima. Ovo će rezultirati dugoročnim sporazumima između visokoškolskih ustanova i kompanija/stejkholdera u oblasti. Ovaj radni paket takođe obuhvata aktivnosti vezane za diskusiju i definisanje metodoloških pristupa u kreiranju i programa obuke. Takođe, u okviru ovih aktivnosti postaviće se i osnova za unapređeni model on-line nastave kao i dugoročne studentske mobilnosti između svih šest partnera u projektu a sve to na bazi analiza i primera dobre prakse. Takođe ovaj WP obuhvata i aktivnosti neophodne za pripremu za punu implementaciju svih postignutih rezultata projekta. Ove aktivnosti imaju za cilj postizanje razmene znanja i ekspertize o „zelenoj energiji“, edukaciji i obuci između PE (partneri iz sektora obrazovanja) i PI (partneri iz sektora industrije) partnera.  A.2.1. Analiza stanja u visokom obrazovanju u oblasti zelenih energija I stanja u energetskom sektoru  A.2.2. Digitalizacija energetskog sektora  A.2.3. Analiza postojećih kvalifikacija na tržištu zelenih energija i predlog novih kompetencija  A.2.4. Analiza stepena zadovoljstva studenata i nastavnika on line sistemom učenja, pravci daljeg razvoja  A.2.5. Izrada inoviranih sadržaja  A.2.6. Izrada nove metodologije on line učenja  A.2.7. Razvoj e platforme znanja  IMPLEMENTACIONI PAKET  U okviru ovog radnog paketa, obaviće se implementacije rezultata postignutih u okviru WP2. Ovaj radni paket obuhvata aktivnosti vezane za usvajanje i prezentaciju inoviranih sadržaja. Rezultat će biti usvojeni inovirani sadržaji iz oblasti zaštite životne sredine. Takođe, ovaj radni paket obuhvata aktivnosti koje se odnose na implementaciju razvijenih sadržaja predmeta i tema u nastavne planove i programe master studija, kao i implementaciju unapređenog modela za on line učenje. Ovim radnim paketom će se razviti novi model za studentske mobilnosti, usaglašen prema komplementarnosti sva tri studijska programa PE, a naročito u skladu sa inoviranim programskim sadržajima. U okviru ovog paketa, realizovaće se aktivnosti na implementaciji LLL kurseva, pri čemu će se pažnja posvetiti posebno interakciji među partnerima PE i PI. Cilj ovog radnog paketa jeste stvaranje svih pravnih i tehničkih uslova za ostvarivanje ciljeva projekta Greenes. Planirane aktivnosti u okviru ovog radnog paketa su:  A3.1.Usvanja inoviranih sadržaja predmeta  A3.2.Usvajanje sadržaja LLL kurseva  A3.3.Upis studenata.  A3.4 Pokretanje e platforme znanja  DISMINACIONI-EKSPLOTACIONI  Ovaj radni paket obuhvata aktivnosti vezane za distribuciju rezultata projekata kao I dugoročnu primenu istih. Proces distribucije rezultata projekta odvijaće se u skladu sa planom diseminacije koji će biti pripremljen od strane PC i prilagođen kapacitetima svakog partnera. Rezultati projekta biće predstavljeni učenicima srednjih škola i budućim studentima kroz različite promotivne aktivnosti direktnog kontakta. Takođe, diseminacija rezultata projekta će se vršiti korišćenjem svih dostupnih Internet komunikacionih kanala: veb stranice, e platforme znanja, portala, društvenih mreža, podkastovi itd.) Ovo će omogućiti podizanje svesti dopiranjem do svih relevantnih zainteresovanih strana i potencijalnih korisnika, kao i pribavljanje najšire moguće podrške. U isto vreme, e-publikacije i onlajn izvori će obezbediti da se rezultati projekta distribuiraju nakon trajanja projekta. Ovaj radni paket takođe uključuje postavljanje i administriranje vizuelnog identiteta projekta – uključujući logo projekta, onlajn identitet i veb stranicu. Sa stanovišta eksploatacije rezultata projekt pored redovnog nastavnog procesa poseban fokus će se staviti na podsticanje i unapređenje kapaciteta studentskih i nastavničkih mobilnosti, između ove tri ustanove kao i PI partnera, koje će imati za cilj sticanje univerzalnih kvalifikacija u oblasti zelene energije, kroz unapređenje znanja u kombinaciji sa digitalnim alatima, kako u radu tako i u učenju. Dalje, kreiranjem e platforme znanja koja treba da obezbedi stalnu sinergiju rezultata projekata sa svim ciljnim grupama sa jedne strane i sinergiju partnera I donosioca odluka sa druge strane. Proces diseminacije biće zasnovan i na intenzivnoj digitalnoj kampanji usmerenoj kako na zemlje partnere u projektu tako i na region uopšte. Svaki segment digitalne kampanje, biće deo velikog sistema koji će dopirati do najširih ciljnih grupa. Razvoj zelenog otiska ustanova, predstavlja novu dimenziju u diseminaciji rezultata projekta.  Planirane aktivnosti u okviru ovog radnog paketa su:  A.4.1. Promocije i kampanje namenjene studentima i profesorima i profesionalcima, Izrada i održavanje web stranice SEO/SEM  A.4.2 Promocija studentskih mobilnosti  A.4.3 Promocija e platforme i realizacija LLL kurseva  A.4.4 Razvoj i implementacija zelenog otiska ustanova I projekta | PROJECT MANAGEMENT  The basic documents that will regulate this area will be PMP – Project management procedures with budget management plan and QAP- Quality assurance of project results. Within these documents, the competencies, communication channels and mechanisms of monitoring the implementation of activities will be elaborated in detail, as well as the assessment of the quality of the realized. To effectively manage the project, two independent bodies will be formed: managing body – PM team and quality control body – PQAP team. Within the competence of the PM team, the realization of all project activities in accordance with the envisaged agenda will be under the responsibility of the PQAP team to evaluate the realized activities and achieved results, as well as the prevention of potential risks. The PM team will oversee strategic project management and will ensure that the project progresses in accordance with the work plan. The two teams will consist of representatives of the PC, P1-P5 partners, but members of one team will not be able to be members of the other team. In this way, independent assessment, and evolution of what has been done will be ensured. There will be regular reports on the progress of the implementation of the project and reports on the results achieved. Reporting will be periodic every two months, via an online communication channel. Reports on the course of activities will be discussed at pm team meetings (every two months – online), while reports on the achieved results will be discussed at the meetings of the PM team and the PQAP team at the meetings to be held organized by partners C, P1 and P2. An important element of monitoring the flow of implementation will be transparency in reporting and promotion of results. This effect will have an institutional, national, and regional dimension.  PMP team:  PC.- Prof. Aleksandra Boričić –  Holds  P1. – Prof. Filip Kokalj  P2 .- Prof Stojanče Nusev  P3. – Miljana Šćekić  P4. -Ivan Angelin  P5. -Boris Novak  The PQAP team will consist of:  PC. Prof. Boban Cvetanović  P1. -Prof. Niko Samc  P2. -Prof. Mitko Kostov –  Holds  P3. -Ljljana Kostić Destopović  P4. -Angelina Petrovska  P5. - Ljubo Germič.  The work packages will be in charge of  the following persons:  WP1- Prof. Alakesandra Boričić-PC  WP2. Prof. Filip Kokalj- P1  WP3. Prof. Gordana Janevska  WP4. Prof. Dejan Blagojević-PC  PREPARATORY DEVELOPMENT PACKAGE  This work package includes preliminary activities necessary for the development and improvement of the situation within eight subjects, on all three institutions PC (Regulations, Energy Potential of Waste, Sensory Systems), P1 (Combustion and Ecology, Energy and Environment, Material and Energy Use of Waste) P2 (Modern Production Technologies and Modern Hydropower Plants). This will result in integrated data on all study programs, their goals with proposals for changes in the field of green energy based on current directives and market requirements on the one hand, as well as existing capacities (infrastructure, facilities, labor, labor, etc.) in the field in all three countries. The results of these activities will be coordinated and published in several reports. Green knowledge, skills and competencies required by graduates, postgraduates and current employees will be defined through cooperation with partners from the economy and will be aligned with their needs and experiences. This will result in long-term agreements between higher education institutions and companies/stakeholders in the field. This work package also includes activities related to discussion and defining methodological approaches in creating and training programs. Also, within these activities, the basis for an improved model of online teaching as well as long-term student mobility between all six partners in the project will be laid, all based on analysis and examples of good practice. This WP also includes the activities necessary to prepare for the full implementation of all project results achieved. These activities aim to achieve the exchange of knowledge and expertise on "green energy", education and training between PE (partners from the education sector) and PI (partners from the industry sector) partners.  A.2.1. Analysis of the situation in higher education in the field of green energy and the situation in the energy sector  A.2.2. Digitalization of the energy sector  A.2.3. Analysis of existing qualifications in the green energy market and proposal of new competences  A.2.4. Analysis of the level of satisfaction of students and teachers on-line learning system, directions of further development  A.2.5. Creation of innovated content  A.2.6. Development of a new methodology of online learning  A.2.7. Development of e knowledge platform  IMPLEMENTATION PACKAGE  As part of this work package, implementation of the results achieved within wp2 will be carried out. This work package includes activities related to the adoption and presentation of innovated content. The result will be adopted innovated content in the field of environmental protection. Also, this work package includes activities related to the implementation of developed course content and topics in master's curricula, as well as the implementation of an improved model for online learning. This work package will develop a new model for student mobility, aligned according to the complementarity of all three PE study programs, and especially in accordance with the innovative program contents. As part of this package, activities will be carried out on the implementation of LLL courses, with particular attention paid to the interaction between pe and PI partners. The aim of this work package is to create all legal and technical conditions for achieving the objectives of the Greenes project. The planned activities within this work package are:  A3.1. Introduction of innovated content of the case  A3.2. Adoption of LLL course content  A3.3. Enrollment of students.  A3.4 Launching knowledge platform.  DISMINATION-EXPLOITATION  This work package includes activities related to the distribution of project results as well as the long-term implementation of them. The process of distribution of project results will take place in accordance with the dissemination plan that will be prepared by pc and adapted to the capacities of each partner. The results of the project will be presented to high school students and future students through various promotional activities of direct contact. Also, dissemination of project results will be carried out using all available Internet communication channels: websites, knowledge platforms, portals, social networks, podcasts, etc.) This will enable awareness-raising by reaching out to all relevant stakeholders and potential beneficiaries, as well as obtaining the widest possible support. At the same time, e-publications and online sources will ensure that the results of the project are distributed after the duration of the project. This work package also includes setting up and administering the visual identity of the project – including the project logo, online identity, and website. From the point of view of exploitation of the results, the project, in addition to the regular teaching process, a special focus will be placed on encouraging and improving the capacity of student and teaching mobility, between these three institutions as well as PI partners, which will aim at acquiring universal qualifications in the field of green energy, through the improvement of knowledge combined with digital tools, both in work and in learning. Furthermore, by creating an e-platform of knowledge that should ensure constant synergy of project results with all target groups on the one hand and synergy of partners and decision-makers on the other. The process of dissemination will also be based on an intensive digital campaign targeting both the project's partner countries and the region in general. Each segment of the digital campaign will be part of a large system that will reach the widest target groups. The development of the green footprint of the institutions represents a new dimension in the dissemination of the results of the project.  The planned activities within this work package are:  A.4.1. Promotions and campaigns intended for students and professors and professionals, Development, and maintenance of the WEBSITE SEO/SEM  A.4.2 Promotion of student mobility  A.4.3 Promotion of e platform and implementation of LLL courses  A.4.4 Development and implementation of green footprint of institutions I project |