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|  ***Summary of pending, projected and received revenue for FY2022 as of September 30, 2021:*** ***Pending Grant Proposals to Date*** Total submitted and awaiting decision on award:    $15,993,697***Projected and Received Grant Awards to Date*** Total revenue for active and completed grant awards this fiscal year:  $2,200,420  ($2,195,402 Active + $5,018 Completed)  |
| ***Pending Grant Proposals to Date*** Total submitted and awaiting decision on award:  $15,993,697 |
| **ACHA - American College Health Association, Campus COVID-19 Vaccine (CoVAC) Initiative:  $3,000 for 1 year:  December 1, 2021 – November 30, 2022** ***Promoting Vaccine Confidence*** This project aims to increase COVID-19 vaccine confidence among students, staff and faculty across the Shepherd campus using peer-to-peer marketing and creative communication strategies.  Project Director: Ms. Holly Morgan-Frye, Vice President for Student Affairs.  |
| **AZA - Association of Zoos and Aquariums, Conservation Grants Fund:  $5,000 for 1 year:  January 1, 2022 – December 31, 2022** ***Preserving Evolvability in a Threatened Species Living in Extreme Environments Using Genome Sequencing:  The Andean Condor Genome Project*** This project would use comparative genomics to understand the evolution of the Andean Condor, an organism that lives under extreme environmental stressors of hypoxia, UV, and climate.  Managing biodiversity necessitates better understanding of how species have adapted to their native habitats, and how to preserve "evolvability," thus enabling us to increase chances for species survival in an ever-changing world. Principal Investigator:  Dr. Sher Hendrickson-Lambert, Associate Professor of Biology.  (This is the first of three current pending proposals for this project.) |
| **CZS - Chicago Zoological Society, Chicago Board of Trade Endangered Species Fund:  $21,955 for 1 year:  October 15, 2021 – October 14, 2022** ***Building More Successful Reintroduction Efforts Through Harnessing the Power of Genome Sequencing: The Andean Condor Genome Project*** Funding is being sought to genome sequence samples collected from captive and wild condors in order to uncover how past natural selection has shaped the Andean Condor genome, and how captive breeding and reintroduction have affected population genetics in wild populations. Following this genomic study, breeding, rehabilitation, and reintroduction can be done with attention to maintaining genetic diversity and preserving genetic variants in adapted genes. Principal Investigator:  Dr. Sher Hendrickson-Lambert, Associate Professor of Biology.  (This is the second of three current pending proposals for this project.) |
| **EWVCF - Eastern West Virginia Community Foundation, Youth and Education Grants: $3,000 for 6 months: January 1, 2022 – June 30, 2022*****Supporting Educational Opportunities for Students***The aim of this project is to support educational opportunities for students, including, but not limited to: preparatory skills, tutoring programs, innovative programs that strengthen educational development, nutrition programs, small capital needs within the classroom, needs within the department, needs within the school, and programs held after-school or during the summer. Project Director: Mr. Jim Klein, Martinsburg Center Director and Director of Marketing for the School of Graduate and Professional Studies. (This proposal is a renewal application for the current active award listed below.) |
| **HEPC STAR - Higher Education Policy Commission’s Science, Technology and Research Division, Instrumentation Grants Program: $20,000 for 6 months: January 1, 2022 – June 30, 2022*****Machine Learning and Artificial Neural Networks for Teaching and Research Applications***The goal of this proposal is to develop a Machine Learning (ML)/Artificial Neural Network (ANN) model to predict the macroscopic mechanical properties based on microscopic electronic and thermodynamic properties of super alloys and magnetic materials. In order to train ML/ANN models, we need a high speed processing system. Funds would purchase sixteen RX-580 Radeon graphic cards and supporting hardware to enable us to train ML/ANN models that will support Shepherd’s educational objectives as well as involving undergraduate students in the current research. Principal Investigator: Dr. Mohammadreza Ghahremani, Associate Professor of Computer Science and Mathematics. |
| **MBZ - Mohamed Bin Zayed, Species Conservation Fund**:  **$24,960 for 1 year:**  **November 1, 2021 – October 31, 2022** ***An Evolution-Based Approach to Management of Captive Breeding and Reintroduction Efforts through Genome Sequencing:  The Andean Condor Genome Project*** Funds would enable Principal Investigator to import tissue samples from Andean condors and genome sequence these birds to uncover signatures of natural selection, measure adaptation and genetic variability in captive breeding programs, and identify and publish a collection of genetic markers as a resource for conservation biologists.  Principal Investigator:  Dr. Sher Hendrickson-Lambert, Associate Professor of Biology.  (This is the third of three current pending proposals for this project.) |
| **NEH - National Endowment for the Humanities, American Rescue Plan:  $104,258 for 1 year: October 1, 2021 – September 30, 2022** ***The History Hub: Digital Humanities, Student Projects, and Public Programs at the George T. Moore Center and Tabler Farm*** We propose a series of interconnected courses, programs, and activities that seek to advance public understanding of how the United States’ core goals of life, liberty, and the pursuit of happiness, however enduring, have never been fully realized. The timing is propitious as Shepherd approaches its 150th anniversary which offers a unique opportunity to localize this national conversation. The proposed activities center on collaboration among different campus stakeholders to advance the public humanities. Project Director:  Dr. James Broomall, Associate Professor of History and Director of the George Tyler Moore Center for the Study of the Civil War.  |
| **NRC - Norwegian Research Council:  $40,000 for 4 years: January 1, 2022 – December 31, 2025** ***Dissection of Genetic and Environmental Factors in Endosperm-Based Hybridization Barriers*** The overall objective of this proposal is to elucidate the genetic networks underlying endosperm-based hybrid barriers and how the environment and temperature interplay with the mechanistic basis for the barrier. Mr. Jason Miller, Assistant Professor of Computer Science, is the lead investigator for Shepherd's sub-award portion of this proposal being submitted by the University of Oslo.  |
| **NSF - National Science Foundation and the WV Established Program to Stimulate Competitive Research (WV EPSCoR): $999,995 for 5 years: August 1, 2022 – July 31, 2027** ***Structural and Functional Connectomics: Innovations in Neuroscience through Advanced Data Science*** The long-term goal of this proposal is to establish West Virginia as a leader in the connectomics revolution. The objective of this proposal is to build the necessary hardware, software, and human resource infrastructure across the State to make us competitive in this arena and allow researchers with interest in connectomics at any level to enter this field. The overarching hypothesis of this proposal is that by intensively developing novel AI-based tools to help address fundamental problems in neuroscience, neuroscientists will be able to uncover structure and function relationships previously not seen at an unprecedented resolution and speed. Dr. Conor Sipe, Assistant Professor of Biology, is the lead investigator for Shepherd’s sub-award portion of this proposal being submitted by the Higher Education Policy Commission on behalf of four WV State Universities (also including WVU, WVS and Marshall). Additional Shepherd team members include: Dr. Jason Best, Assistant Provost and Professor of Astronomy; Dr. Qing Wang, Professor Computer Science and Mathematics; Mr. Jason Miller, Assistant Professor of Computer Science; and Dr. Robert Warburton, Professor of Biochemistry and Dean of the College of Science, Technology, Engineering, and Mathematics.  |
| **Senate Appropriations Committee, Senators Manchin and Capito's Congressionally Directed Spending Requests and USDA Distance Learning and Telemedicine Program (DLT): $110,697 for 1 year:  January 1, 2022 – December 31, 2022** ***Pathways to Postsecondary Education for Rural Students: Dual Enrollment Distance Learning*** Our project to create distance learning options for rural high school students through dual enrollment courses also ensures the safety of West Virginia students and teachers during the COVID-19 pandemic by providing them a structured “safe to learn at home” environment and promotes economic growth within West Virginia’s rural communities by educating the next generation of business leaders, which benefits the State at large. This request was submitted by Dr. Christy Wenger, Interim Co-Dean of the Ruth Scarborough Library and Center for Teaching and Learning, Associate Professor in the Department of English and Modern Languages and Director of Writing and Rhetoric. This proposal has been approved by the relevant bi-partisan subcommittee and included in a bill which will be considered during the Fall 2021 US congressional session.  |
| **Senate Appropriations Committee, Senators Manchin and Capito's Congressionally Directed Spending Requests: $135,000 for 1 year:  January 1, 2022 – December 31, 2022** ***Enhanced Cyberinfrastructure and Regional Connectivity*** Our plan includes coordination with nearby community colleges and universities to identify opportunities for establishing collaborative regional connectivity. We envision an Internet2-connected Science DMZ alongside Shepherd’s existing networks that serve the Enterprise and that serve Research and Education. This request was submitted by Dr. Robert Warburton, Professor of Biochemistry and Dean of the College of Science, Technology, Engineering, and Mathematics.  |
| **Senate Appropriations Committee, Senators Manchin and Capito's Congressionally Directed Spending Requests: $2,411,855 for 1 year:  January 1, 2022 – December 31, 2022** ***East Loop Traffic and Edifice Improvements*** The project goal is to enhance the physical university campus in a manner that will make it more desirable for students, which begins with the removal of unused facilities surrounding the East Loop and replaces them with revenue-generating facilities that will complement the overall student experience at Shepherd. This request was submitted by Ms. Pam Stevens, Vice President for Finance and Administration.  |
| **Senate Appropriations Committee, Senators Manchin and Capito's Congressionally Directed Spending Requests: $4,804,500 for 3 years:  January 1, 2022 – December 31, 2024** ***Critical Campus Security and Safety Infrastructure*** Through this funding, the University Police Department will be able to provide an integrated security camera system, vehicles that operate reliably and effectively, a communication system that will work during the most critical times to provide interoperable synchronization with all regional emergency services, a building/room locking system that will assist in the event of an active shooter or similar threats, a parking enforcement system that will help the Department become more financially solvent, and equipment to properly keep our officers safe. If our equipment and technology needs can be met with this funding, existing funds could be applied to adding at least one additional law enforcement officer to our staff. This request was submitted by Ms. Holly Morgan-Frye, Vice President for Student Affairs.  |
| **Senate Appropriations Committee, Senators Manchin and Capito's Congressionally Directed Spending Requests: $40,000 for 1 year:  January 1, 2022 – December 31, 2022** ***Equitable Educational Resources*** Accessibility Services and the Student Success Center are requesting upgrades in technology and software in order to provide timely, updated, and secure technology for students with diverse learning needs, while striving to create an inclusive and supportive learning environment, provide numerous services, and be able to continue working with students one-to-one. This request was submitted by Ms. Julia Franks, Director for the Student Success Center.  |
| **WV - State of West Virginia: $7,167,500 for 5 years: December 31, 2021 – December 30, 2026** ***Photobiomodulation (PBM) Center of Excellence***The unfortunate confluence of opioid addictions and the COVID-19 pandemic have compounded the health crisis, and present formidable public health, workforce, and economic challenges. This proposal outlines a practical and actionable innovative health care approach in supporting a PBM Center of Excellence to comprehensively address the urgent health care needs. Shepherd University has been engaged in a productive and promising partnership with the PBM Foundation since the Fall of 2016. Co-Directors:  Dr. Kelly Watson Huffer, Associate Professor of Nursing, and Dr. Praveen Arany, Assistant Professor for the School of Dental Medicine at the University of Buffalo and President of World Association of Laser Therapy.  |
| **WVDACH - West Virginia Department of Arts, Culture and History: $4,995 for 1 year: January 1, 2022 – June 30, 2022*****Creative Aging Project for Lifelong Learners - Age 55+***The purpose of this program is to provide up to $5,000 in support for creative aging projects that employ a West Virginia teaching artist, provide sequential programming to teach a new skill in the arts, work with the same group of older adults (age 55+) in each session, and/or have a culminating public event at the conclusion of the project.  Project Director: Ms. Karen Rice, Director of Continuing Education and Lifelong Learning. |
| **WVDEP - West Virginia Department of Environmental Protection, Rehabilitation Environmental Action Plan (REAP): $75,000 for 1 year: January 1, 2022 – February 1, 2023*****Installation of Water Bottle Stations Across Campus*** The aim of this project is to significantly reduce the flow of plastic waste, either to recycling facilities or landfills, by promoting reuse of water bottles while providing safe and clean sources of water on the campus of Shepherd University by replacing water fountains with water bottle filling stations. Project Director: Ms. Shelley Shaffer, Physical Plant Manager in Facilities. Co-Directors: Dr. Heidi Hanrahan, Professor of English and Modern Languages, and Dr. Sytil Murphy, Associate Professor of Environmental and Physical Science.  |
| **WVHC - West Virginia Humanities Council, Teacher Institute Grant: $13,355 for 1 year:  June 30, 2021 – July 1, 2022** ***Voices from the Misty Mountains*** This proposal would fund, “Voices from the Misty Mountains, Reclaiming Our Story for a New Appalachia,” a Shepherd University K-12 Online Synchronous Teacher Institute (with possible hybrid face-to-face capability for local participants), running for two weeks from June 20-July 1, 2022, with two one-day outdoor fieldtrips. This West Virginia Teacher Institute is designed to bring to teachers:  tools, resources, professional development opportunities, as well as a body of knowledge to enable them to carry West Virginia’s rich cultural history and story to children across the State. At the same time, the Institute will provide participants with small individual stipends to cover expenses, individual professional development goals, and/or classroom resources and materials. The Institute will provide access to inspiring literary artists and scholars, bringing enriching experiences for the classroom and giving teachers the tools and means to re-vision their curricula, dispel regional stereotypes, and encourage positive student self-image.  Project Director: Dr. Sylvia Shurbutt, Director, Center of Appalachian Studies and Communities.  |
| **WVHC - West Virginia Humanities Council, Teacher Institute Grant: $8,627 for 1 year:  June 20, 2022 – July 1, 2022** ***Humanizing the Humanities and Teaching Post-Pandemic*** This proposal would fund, a week-long K-16 Humanities Teacher Institute at Shepherd for West Virginia public school teachers in order to help teachers and the learners they serve respond to and recover from the coronavirus by imagining together the future of Language Arts instruction in a post-pandemic world, directly advancing Shepherd University’s mission to be a regional center for academic, cultural, and economic opportunity. Specifically, this grant would fund “Humanizing the Humanities and Teaching Writing Post-Pandemic,” a summer Teacher Institute, which would bring together a diverse group of K-16 teachers to learn together, to become leaders of humanized humanities pedagogy and study, and to continue their association as humanities leaders beyond the Institute itself. The primary audience benefitting from this funding is K-16 West Virginia public school humanities teachers and the underserved students they teach. Project Director: Dr. Christy Wenger, Interim Co-Dean of the Ruth Scarborough Library and Center for Teaching and Learning, Associate Professor in the Department of English and Modern Languages and Director of Writing and Rhetoric.  |
| ***Active Grant Awards to Date*** Total projected grant revenue for the current fiscal year: $2,286,053   |
| **AIG Insurance Via University of Pittsburgh, National Consortium for Teaching About Asia (NCTA): $4,650 for 1 year:  July 1, 2021 – June 30, 2022; FY2022: $4,650** ***Asian Studies Seminar*** Awarded funds will be used to host a seminar focused on Asian Studies.  Project Director:  Dr. David Gordon, Professor of History.  |
| **Claude Worthington Benedum Foundation Grant: $78,000 for ~2 years: January 1, 2020 – October 31, 2021; FY2022: $14,224** ***Student Success Academy (SSA)***Awarded funds enable expansion to the SSA. The Academy has hired an additional full-time Success Coach and an additional graduate student, implemented a peer mentor program, purchased tablets and laptops to assist Academy students, and partnered with local high schools by sharing resources and assisting with college preparation. The peer mentor program consists of five former members of the Academy; each is paid a stipend. This year the program aims to double the number of students served. Principal Investigator: Ms. Holly Morgan-Frye, Vice President for Student Affairs. |
| **DHHS - Department of Health and Human Services, Title IV-E Human Services Grant:  $305,137 for 1 year:  July 1, 2021 – June 30, 2022; FY2022: $305,137** ***Social Work Program*** Awarded proposal renews funding for an existing subsidy for the Social Work program at Shepherd that trains future workers in the Foster Care and Adoption programs in West Virginia.  Project Director: Dr. Craig Cline, Professor of Social Work.  |
| **DOE - Department of Education, TRIO Student Support Services Program:  $1,265,160 for 5 years: September 1, 2020 – August 31, 2025; FY2022: $253,032** ***TRIO Student Support Services*** Funding supports staff salaries and programmatic offerings for Shepherd students who meet criteria for need.  The program offers mentoring, academic counseling and tutoring services for participating students to support their good academic standing while increasing retention and graduation rates.  Project Director:  Ms. Cynthia Copney, M.A., Director of TRIO Programs.  |
| **DOE - Department of Education, TRIO Upward Bound Program:  $1,287,500 for 5 years: September 1, 2017 – August 31, 2022; FY2022:  $257,500** ***TRIO Upward Bound Program*** Awarded funds expand efforts by the existing federally-funded TRIO Student Support Services staff to create a pipeline to Shepherd for high school students in the region through a summer residential program on campus and weekend programs throughout the academic year.  Nationally, Upward Bound programs demonstrate success in creating a path to college attendance for first-generation college students.  Typically, more than half of Upward Bound participants enroll at their host campus after graduating from high school.  This program extends the purview of TRIO staff from just retention efforts to outreach and recruitment of future Shepherd students.  Project Director:  Ms. Cynthia Copney, M.A., Director of TRIO Programs.  |
| **EWVCF - Eastern West Virginia Community Foundation, Berkeley County Industrial Park Development Fund (BCIP): $3,500 for 1 year: August 23, 2021 – December 1, 2021; FY2022: $3,500**  ***Dual Enrollment Scholarships*** Funding will provide direct financial support to approximately 16 high school students in Fall 2021 to eliminate the cost of one three-credit Dual Enrollment Course and/or offset the cost of text books. Project Director: Mr. Jim Klein, Director of the Martinsburg Center and Director of Marketing for the School of Graduate and Professional Studies.  |
| **EWVCF - Eastern West Virginia Community Foundation, Two Rivers Giving Circle:  $1,200 for 1 year:  January 1, 2021 – December 31, 2021; FY2022: $600** ***Seeding Your Future (SYF) Earth Day Celebrations*** SYF is an education outreach program aimed at keeping middle school-aged girls and high school students engaged in science, technology, engineering, art and math (STEAM) fields. The grant funds an Earth Day celebration and workshop for students in grades 4-12.  The workshops will offer hands-on learning activities focusing on environmental conservation.  Events include: a tree and pollinator planting, construction of a sculpture with reclaimed materials, and/or a recycled metal casting workshop. Project Director: Dr. Cecelia Melton, Assistant Professor of Environmental Studies. Co-Directors: Dr. Jacquelyn Cole, Associate Professor and Chair of the Chemistry Department; Ms. Kay Dartt, 3-D Fabrication Manager and Clinical Art Faculty; Dr. Sytil Murphy, Associate Professor of Physics; and Dr. Courtney Campany, Assistant Professor of Biology.  |
| **EWVCF - Eastern West Virginia Community Foundation, Youth and Education Grant:  $3,000 for 1 year:  January 1, 2021 – December 31, 2021; FY2022:  $1,500** ***Martinsburg Center Dual Enrollment Scholarships*** Funding provides direct financial support to approximately 16 high school students in Spring 2021 to eliminate the cost of one three-credit Dual Enrollment Course as well as offset the cost of text books. This grant was secured by Mr. Jim Klein, Director of the Martinsburg Center and Director of Marketing for the School of Graduate and Professional Studies.  |
| **Foundation for Photobiomodulation (PBM):  $470,000 for 3 years:  March 1, 2020 – February 28, 2023; FY2022:  $156,667** ***Center for PBM Excellence in Nursing (CoPEN)*** Funding supports the creation of a PBM education and training center in the School of Nursing.  This project includes equipment purchases, hiring of faculty, appointing a director, and enlisting an instructional design team to develop online curriculum.  PBM, the application of low-level lasers or light-emitting diodes to the surface of the body to improve tissue repair and reduce pain and inflammation, can be used as an alternative to opioids in treating some pain-causing medical conditions.  Co-Directors:  Dr. Kelly Watson Huffer, Associate Professor of Nursing, and Dr. Praveen Arany, Assistant Professor for the School of Dental Medicine at the University of Buffalo and President of World Association of Laser Therapy.  |
| **GEERF - Governor's Emergency Education Relief Fund:  $250,000 for 2 years:  October 1, 2020 – September 30, 2022; FY2022:  $125,000** ***Stubblefield Institute's Listen/Learn/Engage Initiative*** Funding supports an interdisciplinary program Initiative for students in health and education-related majors to better prepare them to shape and debate public policies, and to support training programs preparing them for community leadership roles in the COVID-19 pandemic era.  The Initiative initially targets students majoring in Nursing, Social Work, and Education.  Project Director:  Dr. Stephanie Slocum-Schaffer, Professor of Political Science.  Project Manager:  The Bonnie and Bill Stubblefield Institute for Civil Political Communications.  |
| **HEPC - Higher Education Policy Commission, Campus Mental Health Program:  $5,000 for ~1 year:  August 15, 2021 – June 30, 2022; FY2022: $5,000** ***Wellness Zone*** This funding supports the purchase of furniture, supplies, and materials to establish a permanent physical space aimed at increasing outreach programming and student mental health promotion reflecting the norm that holistic wellbeing is a value and benefit for Shepherd students in support of their academic, social, and personal success.  Project Director:  Ms. Wendy Baracka, Director for Counseling Services.  |
| **HEPC - Higher Education Policy Commission, Diversity for Equity Grant Program:  $5,000 for ~1 year:  August 15, 2021 – June 30, 2022; FY2022:  $5,000** ***Multicultural Events Programming*** Funding supports events and social justice initiatives coordinated by the Office of Multicultural Student Affairs to build cultural and identity awareness, cultivate appreciation for others, celebrate differences and build a community of acceptance for all individuals at Shepherd.  Project Director:  Ms. Crystal Smiles-Tharp, Coordinator for Multicultural and Accessibility Services. Co-Directors: Ms. Annie Lewin, Director of Social Equity, Inclusion and Title IX and Mr. Ben Pigott, Graduate Assistant for Multicultural and Accessibility Services.  |
| **HEPC - Higher Education Policy Commission, Diversity for Equity Grant Program:  $5,000 for ~1 year:  August 15, 2021 – June 30, 2022; FY2022:  $5,000** ***WISE (Wisdom Inspires Student Excellence)*** After a successful pilot program in 2020-2021, this funding supports year two of a high-impact mentoring and early intervention program.  The primary goal is to improve student retention, enhance social and cultural capital, improve access to textbooks and course materials, and boost academic achievement of non-traditional students.  WISE empowers and prepares incoming students and mentors as advocates for social change.  Project Director:  Dr. Chiquita Howard-Bostic, Associate Vice President of Diversity, Equity, and Inclusivity.  |
| **HEPC - Higher Education Policy Commission, Open Educational Resources (OER):  $7,000 for 2 years:  January 1, 2021 – December 31, 2022; FY2022:  $3,500** ***Student-Centered Innovation:  Using OER to Increase Value for Students*** Funds support OER materials that are either in the public domain or have been released under a license that allows them to be used, changed, or shared with others.  Faculty participants: Dr. Christy Wenger, Dr. Heidi Dobish, Dr. Arnetta Fletcher, Dr. Amy DeWitt, Ms. Yildiz Nuredinoski and Ms. Shannon Holliday. Assistant Librarians Ms. Rhonda Donaldson and Ms. Rachel Hally have spearheaded efforts on campus to encourage the adoption of OER.  |
| **HRSA – Health Resources and Services Administration, Advanced Nursing Education Workforce Program (ANEW):  $2,697,023 for 4 years:  July 1, 2019 – June 30, 2023; FY2022:  $674,255** ***Innovative Modalities for Rural Nurse Practitioner Education and Collaboration to Transcend Health Disparities (IMPACT) Program*** Funding provides for 15 scholarships and stipends (totaling $20,000 per student) per year for Doctor of Nursing Practice students, faculty salary support, travel, and equipment purchases, enabling Shepherd to establish clinical training partnerships in the region that will provide longitudinal experiences delivering care to rural and underserved patient populations.  The project includes experiential training delivering alternative pain management through Photobiomodulation (PBM) and delivering/expanding patient care access via cutting-edge telemedicine modalities.  Project Director: Dr. Kelly Watson Huffer, Assistant Professor in the School of Nursing.      |
| **Maryland Humanities Mini Grant: $1,200 for 1 year: January 1, 2021 – December 31, 2021; FY2022:  $600** ***The Maryland Loyalist Project II*** Funding makes valuable primary historical resources from the American Revolution available for study and publication, while training undergraduate students in critical digital humanities skills for the twenty- first century marketplace.  In this phase, the project is creating a digital archive of 82 loyalist women and men from Maryland who petitioned the British Parliament for financial compensation after the war. Project Director:  Dr. Benjamin Bankhurst, Associate Professor of History.  |
| **NASA - National Aeronautics and Space Administration and the WV Established Program to Stimulate Competitive Research (WV EPSCoR), Research Seed Grant: $10,000 for 1 year: July 1, 2021 – May 31, 2022; FY2022: $10,000** ***Machine Learning and Artificial Neural Networks for Predicting Super Alloys and Refractory Alloys*** The goal of this proposal is to develop a machine learning/artificial intelligence model to predict the macroscopic mechanical properties based on microscopic electronic and thermodynamic properties of super alloys and refractory metal alloys. Principal Investigator: Dr. Mohammadreza Ghahremani, Associate Professor of Computer Science and Mathematics.  |
| **NASA - National Aeronautics and Space Administration, West Virginia Space Grant Consortium (WV SGC), College Course Development Grant Program:  $5,000 for 1 year:  May 16, 2021 – May 15, 2022; FY2022:  $4,382** ***Mobile App Course*** Funding allows the University to offer a mobile app development course that provides a career-oriented, project-based learning environment enabling us to attract and retain students, especially underrepresented students in science, technology, engineering, and mathematics (STEM) areas.  Project Director:  Dr. Weidong Liao, Professor of Computer Science and Information Science.  |
| **NASA - National Aeronautics and Space Administration, West Virginia Space Grant Consortium (WV SGC), Extension and Public Outreach Program:  $3,700 for 1 year:  May 16, 2021 – May 15, 2022; FY2022: $3,243** ***Seeding Your Future (SYF) Conference*** Funding would support a one-day conference aimed at middle-school girls, with the goal of encouraging them to gain and/or maintain an interest in science, technology, engineering, art and math (STEAM) fields and careers at this critical time in their lives. Project Director:  Ms. Kay Dartt, 3-D Fabrication Manager and Clinical Art Faculty. Co-Directors: Dr. Cecelia Melton, Assistant Professor of Environmental Studies; Dr. Jacquelyn Cole, Associate Professor and Chair of the Chemistry Department; and Dr. Sytil Murphy, Associate Professor of Physics.  |
| **NASA - National Aeronautics and Space Administration, West Virginia Space Grant Consortium (WV SGC):  $10,000 for 1 year:  May 16, 2021 – May 15, 2022; FY2022: $8,764** ***Measuring Strength of Materials at Shepherd University*** This project analyzes carbon fiber reinforced composite materials used in aerospace and other industries.  Principal Investigator:  Mr. Jason Miller, Assistant Professor of Computer Science.  |
| **NPS - National Park Service:  $56,749 for 3 + years:  September 5, 2018 – December 31, 2021; FY2022:  $8,561** ***Historic Resource Study of the Blackford House, Ferry Hill and Bridgeport Community African American History*** Funding is to produce a Historic Resource Study of the Blackford House, Ferry Hill, and Bridgeport Community focused on African American History.  Project Director:  Dr. James Broomall, Associate Professor of History and Director of the George Tyler Moore Civil War Center, in collaboration with National Park Service staff.  Co-Directors: Dr. Keith Alexander, Associate Professor of History, and Dr. Benjamin Bankhurst, Associate Professor of History.  |
| **NSF - National Science Foundation and the WV Established Program to Stimulate Competitive Research (WV EPSCoR), Summer Undergraduate Research Experience (SURE):  $129,180 for 3 years:  January 1, 2020 – December 31, 2023;** **FY2022:  $32,295** ***Shepherd Opportunity to Attract Research Students (SOARS) IV*** Funding supports stipends for 10 students to participate in summer research projects.  This is the fourth SURE project at Shepherd, building on remarkable previous success.  Principle Investigator:  Dr. Robert Warburton, Professor of Biochemistry and Dean, College of Science, Technology, Engineering, and Mathematics.  |
| **NSF - National Science Foundation, Office of Advanced Cyberinfrastructure:  $99,999 for 1 year: July 1, 2020 – June 30, 2021, extended to June 30, 2022; FY2022: $49,999** ***Shepherd University Cyberinfrastructure and Regional Connectivity Planning*** The goal of this planning grant is to identify and develop the most cost effective way to connect our campus to Internet2 national backbone. Options to be explored include CAAREN Points of Presence (POPs), WVNet, operated by WVU, MAX, operated by University of Maryland at College Park, and MARIA operated by Virginia Polytechnic Institute.  The enhanced connectivity would allow the University to expand its research and educational offerings in the science, technology, engineering, and mathematics (STEM) disciplines.  The planning grant will also feature a collaboration with George Washington University, operator of a Regional Optical Network covering the Washington D.C. area, and operator of a POP in proximity of Shepherd’s campus.  Principle Investigator: Dr. Robert Warburton, Dean, College of Science, Technology, Engineering and Mathematics.  Co-Principal Investigator: Mr. Jason Miller, Assistant Professor of Computer Science.  |
| **NSF - National Science Foundation, Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM):  $1,499,993 for 5 years:  September 1, 2021 – April 14, 2026; FY2022: $177,848** ***Enhancing Academic Achievement and Career Preparation for Scholars in Computer Science, Mathematics, and Engineering.*** This program addresses the challenges facing low-income, academically talented students with demonstrated financial need who are seeking degrees in science, technology, engineering, and mathematics (STEM) disciplines.  Funds provide scholarships and establish a coherent ecosystem of effective evidence-based practices.  Additionally, the project assesses the effects of those practices and other factors on student success in order to generate knowledge about how institutions can create and strengthen learning environments for their scholars.  Project Director:  Dr. Qing Wang, Professor of Computer Science and Mathematics. Co-Directors: Ms. Emily Gross, Director of Academic Support; Dr. Reza Mirdamadi, Chair of Computer Science, Mathematics and Engineering; Dr. Karen Adams, Associate Professor of Mathematics; and Dr. Weidong Liao, Professor of Computer Science and Information Sciences. Evaluator: Dr. Amy DeWitt, Interim Co-Dean of the Ruth Scarborough Library and Center for Teaching and Learning.  |
| **PVAS - Potomac Valley Audubon Society, Monarch Alliance Grant Program:  $1,000 for 1 year:  July 1, 2021 – June 30, 2022; FY2022: $1,000*****Carl Bell Pollinator Garden*** Funds support creation of a monarch nectar garden surrounding the chimney swift tower.  Project Director:  Dr. Courtney Campany, Assistant Professor of Biology.  |
| **USDA - United States Department of Agriculture, Natural Resource Conservation Service (NRCS) Conservation Technical Assistance Program:  $300,000 for 5 years:  May 1, 2018 – April 30, 2023; FY2022:  $60,000** ***Veterans to Agriculture Program*** Funding provides equipment, supplies and salary support for agricultural training programs to be held at Shepherd University’s Agricultural Innovation Center at Tabler Farm. Programs to be developed include:  agricultural science, technology, marketing and business management to complement existing degree programs and create new certifications.  This program targets veterans in need of retraining opportunities, but is available to the general public and Shepherd students.  Project Director:  Dr. Peter Vila, Associate Professor, Environmental and Physical Sciences and Sustainable Agriculture Program Director. |
| **USFS - United States Forest Service:  $15,000 for 2+ years:  September 1, 2019 – December 31, 2021; FY2022: $3,222** ***Monongahela National Forest Red Spruce Restoration Project*** Funding provides travel costs, supplies and materials for Shepherd faculty and students to perform data collection using Unmanned Aerial Vehicles (UAVs) in the Monongahela National Forest to inform USFS plans for red spruce restoration in the area.  Principal Investigator: Dr. Sytil Murphy, Associate Professor in the Institute of Environmental and Physical Sciences.  |
| **WVDE - West Virginia Department of Education, Residency Competitive Grant:  $9,682 for ~1 year:  August 1, 2021 – June 30, 2022; FY2022:  $9,682*****Student Teacher Residency*** Funding supports transition from traditional one-semester residency for student teachers to the new year-long residency requirement.  These programmatic expenses back the partnership between Shepherd and Berkeley County Schools and offers classroom training and mentorship for Shepherd students preparing to become K-12 teachers.  Project Director:  Dr. Dori Hargrove, Associate Professor of Education.  |
| **WVDOF - West Virginia Division of Forestry, Urban Tree Development: $4,900 for 1 year: September 1, 2021 – August 31, 2022; FY2022: $4,065*****Ecophysiology of transplant stress for urban trees***The community engagement and research opportunities that stem from this grant will introduce Shepherd University biology undergraduate students to ecological issues pertinent in their everyday lives. Planting trees in urban areas provides numerous benefits to humans, and this project will increase awareness in our students as well as form a foundational relationship between Shepherd and the community of Charles Town. The funds will also provide an immersive field-based research experience for one biology student during the summer of 2022. In addition, routine sampling and archiving of leaf samples throughout the project will credit additional research opportunities for several biology department students during the 2022-2023 academic year. Principle Investigator: Dr. Courtney Campany, Assistant Professor of Biology. |
| **WVFRIS - West Virginia Foundation for Rape Information and Services:  $3,000 for 1 year:  July 1, 2021 – June 30, 2022; FY2022: $3,000** ***Interpersonal Violence Intervention and Prevention*** Funding provides interpersonal violence intervention services and prevention programs for students. Project Director:  Ms. Annie Lewin, Director of Social Equity, Inclusion and Title IX.  |
| **WVHC - West Virginia Humanities Council CARES Emergency Relief Grants: $10,000 for 1 year:  December 1, 2020 – November 30, 2021; FY2022:  $4,176** ***Locked Down III:  An Oral History of COVID-19 in West Virginia’s Eastern Panhandle*** Funds support phase III of a project that has collected evidence about how the global pandemic impacts the lives of people in our region.  It began in May 2020 to document how ordinary individuals in these vulnerable Appalachian communities are dealing with the evolving crisis.  The goal of the third phase is to continue broadening the project geographically and socioeconomically.  Project Director:  Dr. Keith Alexander, Associate Professor of History.  Co-Director:  Dr. Julia Sandy, Associate Professor of History.    |
| ***Completed Grant Awards to Date*** Total closed-out grant revenue for current fiscal year:  $5,018  |
| **NIH - National Institute of Health, INBRE – WV IDeA Network of Biomedical Research Excellence (INBRE):  $60,881 for 1 year:  August 1, 2020 – July 31, 2021; FY2022:  $5,018*****Optimize the Effect of Immune Checkpoint Inhibition Combined with Chemotherapy on Tumor Growth*** The objective of this project was to develop a predictive simulation platform to improve cancer management by manipulating dose, timing, and sequencing of the therapies in the combined immune checkpoint inhibition and chemotherapy based on a cancer model calibrated against experimental data.  Project Director:  Dr. Qing Wang, Professor of Computer Science and Mathematics.  |