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| *FY2020 Pending Grant Proposals to Date: (October 2019)*  Submitted and awaiting decision on award.  Total current pending proposals to date: $2,366,409 |
| **National Science Foundation (NSF) CISE Robust Intelligence Program: $621,704 for 4 years: July 1, 2020 – June 30, 2024**  ***Knowledge and Blameworthiness in Artificial Intelligence: From Defining Machine Liability to Counterfactual Learning***  Requested funding would provide salary and travel support for faculty and students pursuing research that would develop a conceptual framework for reasoning about different aspects of blameworthiness and test its applications in machine learning. The project will be led by Dr. Pavel Naumov, Associate Professor of Computer Science and Mathematics in collaboration with Dr. Jia Tao, Assistant Professor at Lafayette College. |
| **NSF EPSCoR Track 1 Collaborative Technology Research Program $817,768 for 5 years: June 1, 2020 – May 31, 2025**  ***Collaboratory for Transformative Conversion of Natural Gas***  Requested funding would support salary, travel, supplies and instrumentation purchases for faculty and student researchers to pursue a collaborative research project in cooperation with WVU, Marshal University and WVU Institute of Technology. The Shepherd project component would be led by Dr. Mengyang Li, Associate Professor of Chemistry, and Dr. Mohammadreza Ghahremani, Assistant Professor of Computer Science and Mathematics. |
| **NSF EPSCoR Instrumentation Grant Program: $40,000 (2 proposals for $20,000 each) for 1 year: November 15, 2019 – May 15, 2019**  ***Fabrication Instruments for Honey Bee and Aquaponics Research, and for Teaching Environmental Monitoring* and *Sustainability and Acquisition of a Biolog GEN III MicroStation System to Facilitate Rapid Biochemical Identification and Characterization of Bacteria and Filamentous Fungi in Undergraduate Research and Education***  Two proposals request funding to purchase instrumentation to support research and education in the sciences. One proposal requests funding to purchase a large-format 3D printer, a soldering reflow oven, and an extruder that can manufacture plastic filament for the 3D printer from waste material. These devices would enable the PI, Dr. Jeffrey Groff, Associate Professor of Physics and the Co-PI, Dr.  Cecilia Melton, Assistant Professor of Environmental Sciences, to construct instrumentation to advance ongoing honey bee research. The second proposal requests funding to purchase a Biolog GEN III MicroStation System, which enables species identification for bacteria and fungi and community-level physiological profiling through a patented carbon-source utilization technology. This instrument would enable the PI, Dr. Laura Robertson, Assistant Professor of Biology, and other faculty to conduct research and integrate use of the device into curriculum for biology students. |
| **National Endowment for the Arts ArtWORKS Program: $19,600 for 1 year: July 1, 2020 – October 31, 2020**  ***The Danske Dandridge Literary Festival***  Requested funding would support travel and promotional expenses to bring prominent authors to Shepherd in October 2020, to lead workshops and readings during the planned 2020 Danske Dandridge Literary Festival. Project will be led by Dr. Hope Snyder, Poet in Residence for Shepherd and Director of the Society for Creative Writing. |

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| **Bureau of Land Management, Cultural and Paleontological Resource Management Program:**  **$398,391 for 5 years: July 1, 2020 – June 30, 2025**  ***Shepherd University Cultural Heritage Applied Learning Program***  Requested funding would provide salary support, supplies and materials to develop an applied learning archeology and resource management program at Shepherd that would include collaborative internships with the National Park Service, the Bureau of Land Management, archeological field schools at Shepherd and sites around the region, as well as community outreach and educational events in partnership with the National Park Service and the Bureau of Land Management. The project will be led by Dr. David Hixson, Adjunct Professor in the Department of Sociology and Geography. |
| **National Institutes of Health (NIH) R15 Program: $468,946 for 2 years: January 1, 2020 – December 31, 2021**  ***An in silico screening approach to optimize combining radiotherapy with immune checkpoint blockade***  Requested funding would support salary for faculty, student researchers, travel, equipment and supplies for research to improve the clinical benefit of combined radiation therapy and immune checkpoint blockade for cancer by screening treatments modeled in silico that combine multiple cancer therapies using a multidisciplinary interface involving biology, mathematics, and computer science. The project will be led by Dr. Qing Wang, Professor of Computer Science and Mathematics. |
| *FY2020 Awarded Grant Proposals to Date: (October 2019)*  Total FY2020 projected grant revenue: $1,656,146 |
| **HRSA Advanced Nursing Education Workforce (ANEW) Program, $2,697,023 for 4 years: July 1, 2019 – June 30, 2023; FY 2020: $698,753**  ***Innovative Modalities for Rural Nurse Practitioner Education and Collaboration to Transcend Health Disparities (IMPACT) Program***  Provides funding to support 15 scholarships and stipends (totaling $20,000 per student) per year for Doctor of Nursing Practice students, salary support for participating faculty, travel support and equipment purchases. This award will enable Shepherd to establish clinical training partnerships in the region that will provide longitudinal experiences delivering care to rural and underserved patient populations. The project will also include experiential training delivering alternative pain management through photobiomodulation (PBM) and delivering/expanding patient access to care via cutting-edge telemedicine modalities. The project is led by Dr. Kelly Watson Huffer, Assistant Professor in the Department of Nursing Education. |
| **NIH WV-INBRE One-Year Transitional Award, $72,500: August 1, 2019 – July 31, 2020**  ***Improving Cancer Management Involving Targeted Radiotherapy via Modeling and Simulation***  Awarded funds support salary, travel and the purchase of supplies to support faculty and student researchers conducting research that seeks to utilize the development of equations to model and predict tumor growth under the dynamics of combination therapy. The project will be led by Dr. Qing Wang, Professor of Mathematics. |
| **HEPC Firm Foundations Initiative, $5,000 for 1 year: April 14, 2019 – May 31, 2020**  Funding supports stipends for Shepherd employees providing academic support to students participating in the program. The project is led by Dr. Laura Renninger, Dean of Teaching and Learning. |

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| **NASA West Virginia Space Grant Consortium: Two grants awarded totaling $9,977 for 1 year: May**  **1, 2019 – April 30, 2020**  Two proposals were awarded from NASA West Virginia Space Grant Consortium providing funding to support: (1) Course Development funding to support the development of a Genomics and Bioinformatics Lecture and Laboratory course led by Professor Sher Hendrickson ($4,977; (2) Education and Public Outreach funding to support the Seeding Your Future annual conference hosted at Shepherd to engage and inspire middle school girls to pursue studies in the College of Science, Technology, Engineering, and Mathematics (STEM), led by Professor Sytil Murphy ($5,000). |
| **NSF EPSCoR Instrumentation Grant Program, $20,000 for 1 year: December 1, 2018 – November 31, 2019**  ***High-Accuracy Instrumentation for Unmanned Aerial Vehicle (UAV) Surveys***  Proposal, submitted by Professor Steven Shaffer from the Institute of Environmental and Physical Sciences, received funding to purchase devices to enable the existing UAVs used by the Environmental Geomatics and Geographic Information Systems programs to dramatically increase the accuracy of UAV ground surveys enhancing research capabilities and educational impact for the department. |
| **NSF EPSCoR Innovation Grant Program, $40,000 for 1 year: January 1, 2019 – December 31, 2019**  ***X-Ray Fluorescence (XRF) Analyzer for Teaching and Research Applications at Shepherd***  Funding will be used to purchase a device and research materials for determining elemental composition of material samples from an arc melting system. Dr. Mohammadreza Ghahremani, Assistant Professor of Computer Science and Mathematics, proposes to use the device for both magnetic refrigeration technology research and instruction in materials science, electromagnetics and nanotechnology. |
| **University of Oslo Collaboration, $35,000 for 3 years: June 1, 2018 – May 31, 2021; FY2020: $11,667**  ***The Role of Small RNAs in Genomic Imprinting and Hybrid Barriers***  Shepherd entered into a collaborative research project with the University of Oslo that provides support for Jason Miller, Visiting Professor of Computer and Information Sciences, and students to perform bioinformatics analyses critical to the research. |
| **WVU Research Corporation Subcontract from TaiRx, Inc., $1,260: July 1, 2019 – December 31, 2019**  ***Evaluation of Humanized 3D1 Anti-Nodal Antibodies***  Funding supports direct costs related to Dr. Hendrix’s role as Co-PI on this project, including proposal research and experiment design and interpretation. |
| **West Virginia Higher Education Policy Commission $7,500 for 1 year: August 1, 2019 – July 31, 2020**  ***Diversity for Equity Grant Program***  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. |
| **West Virginia Bureau of Senior Services, $2,500 for 1 year: July 1, 2019 – June 30, 2020**  ***Aging Well Workshop at Shepherd***  Funding supports program costs for the 2020 Aging Well Workshop led by Dr. Heidi Dobish, Associate Professor of Psychology. |

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| **West Virginia Department of Natural Resources (WVDNR) Cooperative Agreement, $25,000 for 1+**  **years: August 1, 2019 – December 31, 2020**  ***Supporting projects to research, protect and enhance West Virginia’s Natural Resources***  Funding supports Shepherd faculty pursuing archeological projects in the region that support WVDNR initiatives and Shepherd’s research and educational objectives. The first project will be led by Dr. David Hixson, Adjunct Professor of Archeology. |
| **USDA Natural Resource Conservation Service (NRCS) Conservation Technical Assistance Program,**  **$300,000 for 5 years: May 1, 2018 – April 30, 2023; FY2019: $60,000**  ***Veterans to Agriculture Program at Shepherd***  Proposal requests funding for equipment, supplies and salary support to launch an agricultural training program at Tabler Farm (N/K/A Shepherd University Agricultural Center). Training programs in development include courses in agricultural sciences and techniques as well as marketing and business management courses to complement existing degree programs and potentially create certification programs. Programs will target veterans in the region in need of retraining opportunities, but will be available to the general public as well as existing and potential Shepherd students. Project Director: Dr. Peter Vila, Associate Professor, Institute of Environmental and Physical Sciences. |
| **West Virginia Department of Education (DOE), $40,635 for 1 year: August 1, 2019 – July 31, 2020**  ***Professional Development Schools***  Funds will support programmatic expenses to back the partnership between Shepherd and Berkeley County Schools and would offer classroom training and mentorship for Shepherd students preparing to become K-12 teachers. The project will be led by Dr. Dori Hargrove, Assistant Professor of Education. |
| **DOE Upward Bound Program, $1,287,500 for 5 years: September 1, 2017 – August 31, 2022; FY2020:**  **$287,537**  ***Shepherd University’s 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, and typically more than half of Upward Bound participants enroll at their host campus after graduating from high school. This proposed program extends the purview of TRiO staff from just retention efforts to outreach and recruitment of future Shepherd students. Lead Project Director: Cynthia Copney, M.A. |
| **National Park Service (NPS), C&O Canal National Historical Park Historic Structures Report,**  **$56,749 for 1 year: August 1, 2018 – December 31, 2019**  ***Documenting the History of the African American Experience at Ferry Hill, The Blackford House and the Bridgeport Community***  Funding provides support for Shepherd faculty and students to conduct research leading to a historic structures report and a historic resource study focused on African American History as it relates to Ferry Hill. Principal Investigator: James Broomall, Ph.D., Assistant Professor of History and Director of the Civil War Center, Co-PIs: Keith Alexander, Associate Professor of History and Benjamin Bankhurst, Ph.D., Assistant Professor of History. |

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| **DOE Student Support Services Program, $921,001 for 5 years: September 1, 2015 – August 31, 2020;**  **FY2020: $253,032**  ***Shepherd University’s TRiO Student Support Services Program***  Awarded funds support 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, increasing student persistence and success in college. Lead Project Director: Cynthia Copney, M.A. |
| **US Forest Service (USFS), Forest Restoration Project, $15,000 for 1+ years: September 1, 2019 – December 31, 2020**  ***Monongahela National Forest Red Spruce Restoration Project***  Awarded funds support 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. The project will be led by Dr. Sytil Murphy, Associate Professor, and Steven Shaffer, Lecturer, in the Institute of Environmental and Physical Sciences. |
| **WV EPSCoR Semester/Summer Undergraduate Research Experience (SURE), $147,108 for 3 years: January 1, 2017 – December 31, 2019; FY 2020: $49,036**  ***Shepherd Opportunity to Attract Research Students (SOARS)***  Awarded proposal renews funding for an existing research mentoring program at Shepherd that engages students in an eight-week summer research experience. Over the course of the three-year funding period, between 25-35 Shepherd students will complete faculty-mentored independent research projects, giving them a competitive edge for success in employment and/or graduate studies. Lead Principal Investigator: Dr. Robert Warburton, Dean, College of STEM. |