**FACILITIES AND OTHER RESOURCES**

*The document below contains general information about Texas Woman’s University, its campuses, degrees offered, student body, research support offices, and facilities and will need to be tailored for your project. This will give you a place to start writing your NIH Facilities and Other Resources document. Most proposals will not require all the sections below, select only what you need. Since this is general information, the PI/Co-PI’s specific laboratory/general equipment\* and that of any subawardee institution(s) should be added. \*Specialized equipment required for your research may be included but must also be in the* ***Equipment*** *document. Highlighted text should be replaced or removed.*

*Keep the information relevant to your research and the focus/priorities of the grant. Include biohazard and safety equipment, if applicable. When specific brand names, vendors, versions, or quantities of items are listed in this document, please verify that the information is still accurate. For additional information or to request additions or changes, contact Carolyn Hardin (**chardin1@twu.edu**).*

Texas Woman’s University (TWU) builds on its long tradition as the nation’s largest public institution primarily for women and is committed to transformational learning, discovery, and service in an inclusive environment that embraces diversity (https://twu.edu/about-twu/purpose-mission-vision-values-principles/).

**The University**

Texas Woman’s University offers high quality education in the liberal arts, sciences and professional studies. TWU also conducts research to enhance the progress and welfare of the people of Texas, the nation, and the world in a time of rapid technological and social change.

Health-related studies and graduate education are integral to the mission of Texas Woman’s University. TWU has for many years been a regional and national leader in offering nursing and health science programs. TWU continues as the largest provider of nursing and allied health professionals in the state and one of the largest in the nation. TWU’s Institute of Health Sciences, the General Divisions, and the Graduate School offer co-educational opportunities for study at the undergraduate or graduate level.

Doctoral programs are offered in allied health sciences, education, human ecology, kinesiology, library and information studies, nursing, and selected areas of the arts, humanities, and natural and social sciences.

Texas Woman’s University, with its main campus in Denton and two health science centers in Dallas and Houston, serves not only the north central region, but also the entire state of Texas. The T. Boone Pickens Institute of Health Sciences - Dallas Center, located in the Medical District, offers academic programs in a variety of health science fields to serve this major area of Texas. The Houston Center, located in the Texas Medical Center, provides an ideal educational setting for students of health science and related fields. The graduate programs in health care administration, nursing, nutrition and dietetics, occupational therapy, and physical therapy offered in Houston are in the vanguard of graduate-level, professional health education in the Southwest.

Texas Woman’s University occupies a special niche in public higher education in Texas as an institution, primarily for women, which offers a broad range of baccalaureate programs in the liberal arts and sciences and professional fields; graduate programs which emphasize the health sciences and human services professions as well as selected areas of arts and sciences in a campus environment which cultivates leaders.

Social and clinical research is the major effort in the total TWU research enterprise. Corresponding to the TWU imperative of contributing to improvements in professional practice through dissemination of knowledge and through research, the broad scholarship focus of both discovery and application science is directed towards knowledge development that aligns with the biological and social determinants of health and illness.

**Student Body**

Enrollment at Texas Woman’s reflects its historical position with women making up approximately 87.9% of the Spring 2023 enrollment of 15,664. The student body included 65.5% undergraduates; 34.5%, who were enrolled in masters programs and doctoral programs. (TWU Fact Book, 2023).

Texas Woman’s is an ethnically diverse institution and received the fourth-highest diversity index rating on US News and World Reports 2021 “Best Colleges” Campus Ethnic Diversity report as well as ranking 2nd in Texas. (https://www.usnews.com/best-colleges/rankings/national- universities/campus-ethnic-diversity). Fall 2022 enrollment included 60.1% minorities, primarily African-American (18.4%) and Hispanic (29.7%). Texas Woman’s is a federally designated Hispanic-Serving Institution as defined by the U.S. Department of Education.

In the 2022-2023 academic year, 4,279 degrees were conferred by Texas Woman’s. Of these 2,095 were at the bachelor’s level, 1,830 were at the master’s level, and 354 doctoral degrees were awarded.  Minority ethnicities comprised 63.1% of the undergraduate degrees, 54.1% of the master’s degrees, and 43.5% of the doctoral degrees awarded. At the undergraduate level 17.9% were African-American and 32.5% were Hispanic. At the masters level 18% were African-American and 22.7% were Hispanic, and at the doctoral level 11.3% were African-American and 19.2% were Hispanic. (TWU Fact Book, 2023)

Texas Woman’s is uniquely prepared to train women and minorities in the health-related sciences, thereby facilitating biomedical research and increasing diversity. Texas Woman’s offers 11 doctoral degrees in health-related fields including Molecular Biology, School Psychology, Counseling Psychology and Sociology in the College of Arts and Sciences; Nutrition, Health Studies, Kinesiology, Physical Therapy, and Occupational Therapy in the College of Health Sciences; and Nursing Science, Nursing Practice in the College of Nursing. Of the 209 doctoral level degrees conferred in 2021-2022, 168 were in these fields of study. (TWU Fact Book, 2023)

**Research and Sponsored Programs**

The Office of Research and Sponsored Programs (ORSP) is the central unit whose primary mission is to preserve TWU’s ability to compete for external funds by ensuring that regulatory requirements are properly integrated and consistently implemented throughout the university.

ORSP assists faculty with identification of funding sources, preparation and submission of proposals, financial management of grants, and compliance with grant requirements. It also administers the university’s resources to support research. The main office is located on the Denton campus with active research offices at the Dallas and Houston Institutes for Health Sciences.

Texas Woman’s University has comprehensive and interrelated policies and guidelines that address the conduct of TWU employees, their interactions with private industry, and disclosure of conflict of interest. ORSP provides resources for investigators and the university as a whole to achieve and maintain ethical principles and compliance with federal, state, and university regulations governing research. The Research Compliance Coordinator assists and supports faculty and staff regarding guidelines and regulations governing grants, allowability of expenditures, facilitates time and effort reporting, and provides training on research and grant compliance.

The Vice Provost for Research, Innovation and Corporate Engagement facilitates formation of research teams across multiple disciplines and in focused outcomes-driven research, and develops opportunities to build external partnerships with established investigators at research-intensive universities to spur the growth of the TWU research enterprise.

TWU employs a full-time Scientific Equipment Repair Technician who provides assistance with setting up and testing new equipment, repair and calibration of scientific equipment no longer under warranty; purchasing parts for scientific equipment; obtaining service from outside vendors; and developing operation and maintenance procedures. Service contracts are maintained on major equipment.

**Institutional Review Board**

Human subjects research at Texas Woman’s is governed by TWU's Federal-Wide Assurance (FWA), TWU policy, and Institutional Review Board (IRB) procedures. TWU policy stipulates that all research conducted by any TWU faculty, staff or student using human subjects has approval from a TWU IRB before the research is initiated. Each of the TWU campus IRBs (Dallas, Denton, and Houston) is registered with the Office of Human Research Protections (OHRP) and operates under TWU’s FWA.

TWU uses Single-IRB procedures for NIH and other federally funded studies. Typically TWU enters into a formal agreement with the other institution(s) through an Institutional Authorization Agreements (IAA). One institution relies on the other’s IRB for the review and approval of an IRB study. TWU will work closely with the other institution(s) to determine the IRB of record and the relying IRB.

TWU’s process for application submission uses a completely online submission process with the platform, Cayuse IRB. Researchers submit initial applications, and IRB members complete reviews and grant approvals all through Cayuse. After receiving initial approval, researchers may also submit modifications, renewals, closures, and incident reports through Cayuse. All IRB processes are facilitated by the IRB analysts who serve all three IRBs. The analysts provide support to researchers and the IRB members throughout the application submission and review processes.

**Institutional Animal Care & Use Committee**

Per TWU policy, the Institutional Animal Care & Use Committee (IACUC) reviews and approves all research at involving vertebrate animals to insure humane treatment in all aspects of the care and use of animals for research, testing, or education. All members of research teams using animals must complete mandatory training. The IACUC operates under TWU’s federally approved animal welfare assurance.

**Institutional Biosafety Committee**

The TWU Institutional Biosafety Committee (IBC) is responsible for oversight of all laboratories and research projects that involve recombinant DNA (rDNA) or biohazardous agents. Faculty and staff with teaching or research laboratories containing chemicals used as reagents or for purposes other than cleaning are required to register their laboratories annually. If either rDNA or biohazardous agents are present in the laboratory, the researcher will be notified by the IBC that (1) the project is exempt from NIH Guidelines or (2) a full application to the IBC must be submitted for the project. Anyone working in a laboratory that is registered with the IBC as containing either recombinant DNA (rDNA) or biohazardous agents must complete biosafety training once every 4 years.

**Biohazard and Safety Equipment**

[The current research does not involve biohazards, and only requires general safety equipment such as ……...]

-or-

[Include a paragraph about potential hazards/biohazards and safety equipment available in your lab.]

**Center for Research Design and Analysis**

The Center for Research Design and Analysis (CRDA) is an academically-based, multidisciplinary research support and service center, under the Office of Research and Sponsored Programs. The CRDA houses its own statistical and qualitative research consulting lab and survey lab. The Center’s experienced consultants provide expertise in survey design, needs assessment, program evaluation, sampling, research design, statistical analysis, and report writing.

The CRDA provides qualitative assistance and statistical and research design consulting to faculty and students working on grant proposals, research projects, and dissertations and theses. This department also offers many research resources for the benefit of the university and its researchers.

**Center for Student Research**

The Center for Student Research (CSR) enhances the educational experience for students by providing opportunities for meaningful interaction with faculty through support, education, and programming in research and creative activities. The goals of CSR are to provide opportunities for students to participate in all phases of research and creative activity, from design through dissemination and to facilitate research partnerships between TWU students and faculty by promoting faculty-mentored research opportunities for students.

The principal programs of the CSR are: the Student Creative Arts and Research Symposium; Faculty-Mentored Undergraduate Research Program; Research Grant and Research Presentation Grant Programs; Excellence in Student Research and Creative Activity Awards; and Student Research Workshop Series.

**TWU Technology Support**

Texas Woman’s University provides students, faculty and staff with the highest quality computer equipment strategically located across all of our campuses (Denton, Dallas, and Houston). A centralized technology department manages four units: business operations, critical infrastructure, enterprise applications, and client services, which includes a Service Desk that is staffed seven days a week to handle or escalate incidents or requests. Every faculty, staff, and administrator is provided with computer equipment that is maintained and replaced on a four-year interval to provide the latest technology to accomplish the university’s goals. TWU provides premier data analysis products with university-wide instructor licenses, such as SPSS, SAS, and NVivo. Additional software can be reviewed at any time by initiating the request through the Service Desk. The university provides technology training through workshops, webinars and LinkedIn Learning, a web-based repository of technical and professional instructional videos, accessible to all faculty, staff, administrators, and students anytime and anywhere.

**TWU Libraries**

The TWU Libraries provide global information services, education, and resources for teaching, learning and research to prepare students for success in their professional and personal lives. Library staff teach research skills and offer library instruction in the classroom, in the Library and over the web.

The Blagg-Huey Library on the Denton campus offers students a modern facility for accessing both print and electronic information in an environment that provides comfort and inspirational beauty. Students from all three campuses can borrow materials, receive in-depth research consultation, and access all TWU Libraries’ collections. In support of the academic and research programs at TWU, the libraries offer access to over 500,000 print volumes; 330,000 e-books; 35,000 microform titles; 105,000 streaming media titles; 157,000 print journals; 192,000 electronic journals, as well as over 300 databases. The electronic resources can be accessed 24/7 from anywhere Internet connection is available.

Satellite collections are available at the T. Boone Pickens Institute of Health Sciences – Dallas campus and the TWU Institute of Health Sciences – Houston campus.  In addition to the multiple resources of the Texas Woman’s University Libraries, students and faculty may use the libraries of more than 125 participants in Texshare and over 5,000 national and international libraries through interlibrary loan services.

**Center for Faculty Excellence**

The Center for Faculty Excellence at TWU serves faculty of all ranks on all three campuses. The center is the “hub” or “commons” for professional development activities, and it provides resources, support, and inspiration for the development and advancement of faculty in all career phases as teachers, scholars, mentors, researchers, and leaders.

**Support for Early Stage Investigators [if applicable]**

The university has multiple strategies for developing its early stage investigators. Teaching loads are often reduced during the first year of employment, and seed money from multiple sources such as the Research Enhancement Program, the Chancellor’s Research Fellowship, and the Hanover Grants Academy supports their initial efforts in gathering pilot data and publication. The Office of Research and Sponsored Programs assists them with locating funding opportunities, working with individual faculty on a one-to-one basis to train them in the process of proposal development and grant writing, as well as providing workshops on research related topics.

**Scientific Research Commons**

The Scientific Research Commons (SRC) building on the main campus in Denton was completed in June 2020. This four-story, 80,000 sq. ft. state-of-the-art facility has office and laboratory space for researchers from four departments and is designed to foster collaboration among faculty.

The shared lab space on the north side of the third floor consists four rows of bench stations with common equipment located along the perimeter (balances, microwaves, pH meters, power supplies, PCR machines). The lab contains appropriate equipment and bench space for cell-based assays and molecular biology work. Equipment rooms that can be entered from the central lab space contain additional shared equipment, including centrifuges, microscopes, gel imaging systems, plate readers, and the flow cytometer.

Faculty, students, and staff have been allocated private offices or workspaces. Three conference rooms and three smaller huddle rooms are also available to reserve on the second and third floors for group laboratory meetings. Administrative offices within each department support all programmatic and research needs. Photocopiers, fax machines, digital scanners, a poster printer, and other standard office equipment are available to all staff and researchers.

**T. Boone Pickens Institute of Health Sciences-Dallas Center [check details]**

The TWU T. Boone Pickens Institute of Health Sciences-Dallas Center (IHS-Dallas) opened in January 2011 and features an eight-story, 190,000-square-foot facility. The building provides a state-of- the-art, high-technology campus site for all programs offered on the Dallas campus including Nursing, Occupational and Physical Therapy, and Health Systems Management. The Stroke Center at IHS-Dallas serves as a clinical site for Communication Sciences & Disorders.

Current facilities in Dallas including classrooms, conference rooms, faculty office space, study areas, laboratories, and the library are available during the week, in the evenings, and on Saturday. Students have access to fully-equipped computer labs with capabilities to accommodate 70-100 students at individual computers. There are large skills-lab areas for students to use for certain skills acquisition practice before actual clinical experiences in the areas of Nursing, Occupational Therapy (OT), and Physical Therapy (PT).

The Research Suite consists of 4 specialized laboratories for data collection, 5 faculty research labs for externally funded researchers, a grant administrator office, a large reception area for research participants which includes a waiting area, a clerical area, and a file storage area. Additionally, the Research Suite houses a Graduate Student Research room with file storage, a Research Workroom for conducting interviews or small focus group meetings, and a conference room for larger meetings of 10-12 people. In total, the Research Suite occupies 4256 sq. ft. of space.

**The Stroke Center–Dallas** **[check details]**

The Stroke Center supports ongoing clinical trial research of aphasia recovery in collaboration with investigators from The University of Texas Southwestern Medical Center, Dallas. The Stroke Center-Dallas offers a unique opportunity for patient treatment and student/professional training based on current knowledge regarding cognitive, physical and psychosocial recovery for a person post stroke. There are three distinct components of our programs: 1) student training, 2) clinical research & 3) professional services.

Research at the Neurophysiology Lab within The Stroke Center-Dallas focuses on the neural correlates of speech and language disorders using electrophysiological techniques in adults and children. Current studies include exploring the use of non-invasive brain stimulation (transcranial direct current stimulation-tDCS) paired with impairment-level language therapy to facilitate recovery from aphasia following stroke.

**Institute for Health Sciences-Houston [check details]**

The Institute of Health Sciences-Houston (IHS-Houston) has been located in the Texas Medical Center since 1961. In 2026, the IHS-Houston moved into a 10-story, 202,000 sq. ft. “campus-in-one-building”. It houses classrooms, training and research laboratories, and a floor dedicated to the interdisciplinary research in nursing, nutrition, physical therapy, and occupational therapy. There are over 1,300 students enrolled at the IHS-Houston. Its educational focus is both undergraduate and graduate education in nursing, as well as graduate studies in occupational therapy, physical therapy, health care administration, and nutrition and food sciences.

**Human Nutrition Research Laboratory [check details]**

The Human Nutrition Research (HNR) laboratory measures 336 sq. ft. and includes up-to-date equipment necessary for biochemical and biomarker analysis. The lab houses basic science equipment such as microcentrifuges, two bench centrifuges for blood component separation, vortexes, orbital shakers, water bath, magnetic plates, digital scales, and calibrated single and multi-channel pipettes. It includes two lab research freezers (-30°C and -80°C) with dedicated space to store plasma/serum. Lab research refrigerators (4°C) are located in an adjacent lab space for reagent and chemical storage. The lab also includes a Thermo Scientific Hamilton SafeAire II Laboratory Fume Hood to ensure adequate ventilation. The Epoch 2 spectrophotometer is networked to a Windows-based computer and printer with Gen5 software and determines biomarker concentrations from ELISA and RIA experiments. The Gen5 software configures multiple curve fits including 4- and 5-paramater curves. Phlebotomy equipment and supplies are also located in this laboratory. The laboratory is equipped to measure blood pressure and endothelial function. The laboratory is fitted with standard safety equipment under the Department of Environmental, Health and Safety at TWU and Di water systems (Millipore RiOs-Di Water Purification System). A contracted service through TWU disposes of hazardous biomedical waste generated from the laboratory as necessary.

**Food Preparation Laboratory [check details]**

The Food Preparation Laboratory includes a double-stack oven, electric stove-top burners, two refrigerators with freezers (-20°C food freezer) and research-grade food scales. Pots, pans, utensils, thermometers, and food storage containers are available to prepare and store the meals for projects.

**Nutrition, Exercise, and Applied Physiology Imaging Laboratory [check details]**

The ~250 sq. ft. Nutrition, Exercise, and Applied Physiology Imaging laboratory is located on the 10th floor of IHS-Houston. This laboratory is well-equipped and specializes in the non-invasive assessment of vascular and skeletal muscle function. Research equipment includes 1) A Duplex Ultrasound (Terason uSmart 3300, Burlington, MA) for assessment of resting and exercise skeletal muscle blood flow, and measurement of macro- and microvascular function; 2) A Near-infrared Tissue Oximeter (Oxiplex TS, ISS, Inc., Champaign, IL) for indirect measurement of skeletal muscle oxidative function and assessment of changes in skeletal muscle tissue oxygenation in response to either ischemic stimulus or exercise. This lab is also equipped with a high-performance, physiological data acquisition system (PowerLab, ADInstruments, Colorado Springs, CO) and specialized vascular analysis software (Cardiovascular Suite, Quipu, Pisa, Italy) that allows for high-fidelity, data assessment and analysis.

**Clinical Exercise Testing Laboratory [check details]**

The Clinical Exercise Testing Laboratory is a roughly 1,000 sq. ft. space equipped for cardiopulmonary exercise testing, body composition assessment, and multiple forms of exercise training. This includes: 1) Computerized metabolic measurement system (Parvo Medics TrueMax 2400, Sandy, UT) for assessment of ventilation and gaseous exchange at rest (RMR) and during maximal exercise (VO2max); 2) Air-displacement plethysmography (BODPOD, Cosmed, Concord, CA, USA) and Dual-energy X-ray Absorptiometry (Horizon, Hologic, Marlborough, MA) for assessment of body composition; 3) Cycle ergometers (Ergomedic 828E, Monark, Vansboro, Sweden) and treadmills (Trackmaster TMX 425, Full Vision, Newton, KS) for aerobic exercise training; and 4) Upper- and lower body resistance exercise equipment (Life Fitness, Rosemont, IL) for resistance training. Our lab is also equipped with physical activity monitors (ActiGraph wGT3X-BT, Pensacola, FL) and post-processing software (ActiLife, Pensacola, FL) to quantify physical activity levels during dietary and/or exercise interventions.

**Densitometry Room [check details]**

The Densitometry Room is a private room measuring 90 sq. ft. that includes the Hologic Horizon W dual-energy x-ray absorptiometry (DXA) system. The Horizon W DXA (Hologic) includes a 128 high-resolution multi-element ceramic digital detector array with a high frequency X-ray generator that analyzes body composition and bone density through whole body or one of 12 regional scans in individuals up to 500# in less than 7 minutes. The Advanced Body CompositionTM analysis with Inner CoreTM Viseral Fat Assessment determines visceral and subcutaneous fat compartments at the L4-L5 lumbar region that highly correlates (r=0.93) with computed tomography. The APEX5 operating system and additional software components for the DXA allow for advanced data reporting alongside comparisons with the National Health and Nutrition Examination Survey and ethnic reference data.

**Biomechanics Laboratory [check details]**

The Biomechanics Laboratory is an 888 sq. ft. state-of-the-art laboratory with all equipment necessary for biomechanical, human motion, and human performance analysis. It includes a 10-camera Vicon motion analysis system, 4 force plates, wireless TekScan foot pressure system, Biodex isokinetic device, NeuroCom balance master, Actigraph accelerometers, and Delsys electromyography equipment. This laboratory houses 5 Windows-based desktop computers with their respective printer and all the software necessary to run all the equipment allocated in this laboratory.