**CHES Information for Grants and Applications**

Note for appropriate use of this boilerplate:

This is a large document intending to provide information across a wide spectrum of needs. Please do not copy/paste the full document into a grant proposal. Instead, selectively pick and choose the content that would be appropriate for the grant funding agency and your specific proposal.

This is a dynamic document, content can be added or edited as needed. If you wish to do so, please e-mail Jeannine Lawrence at [jlawrence@ches.ua.edu](mailto:jlawrence@ches.ua.edu) with suggested modifications.

**Boilerplate regarding the overall environment at The University of Alabama is updated regularly and available through the**

**The Office of the Vice President for Research & Economic Development (OVPRED)**

The OVPRED offers numerous programs designed to build the university’s research community. These activities include networking sessions to foster collaboration, funding search resources, internal funding opportunities, and professional development to enhance the ability of faculty to secure funding for research.

**Office of Sponsored Programs** **(OSP)**

The OVPRED’s OSP provides support to faculty in the pursuit, administration, and management of externally funded grants and ensure that funded research adheres to ethical and legal standards for research as established by Federal and State laws as well as the University of Alabama’s own research policies.

**Descriptions and capabilities of UA Research Institutes & Centers**

<https://research.ua.edu/institutes-centers/>

**Descriptions and capabilities of UA Research Facilities and Instrumentation**

<https://research.ua.edu/resources/facilities/>

**UA Research Facts and Figures**

<https://research.ua.edu/about/#factsfigures>

**ORED Forms and Templates**

<https://research.ua.edu/resources/forms/>

**The University of Alabama College of Human Environmental Sciences**

The College of Human Environmental Sciences (CHES) is a senior academic unit in the State of Alabama, offering professional programs in the field of human environmental sciences. Throughout its history, the college has achieved national reputation for excellence through the quality of its academic programs and faculty, as well as through the success of its graduates. The mission of the College of Human Environmental Sciences is to provide strong undergraduate and graduate programs in the associated fields within human environmental sciences. Further, the College strives to contribute to the generation of new knowledge in the field and to the application of this knowledge to improving the quality of life of individuals, families, and communities. CHES is the fourth largest academic division at the University of Alabama. The college is composed of 5 departments, and maintains 11 undergraduate degree programs, 8 masters degree programs, and 2 doctoral degree programs. It maintain a current enrollment of 2722 undergraduate majors and 689 graduate students in 2022. CHES employs >100 full-time faculty members, with 58 tenured or tenure-track faculty.  Additionally, the college employs 34 full-time staff to support academic initiatives and student growth, as well as 145 staff working in non-academic initiatives such as The Children’s Program and RISE. CHES maintains 4 computer labs for use by students and faculty, with dedicated information technology staff to support computer software and hardware needs.

The CHES Faculty **Grant Writing Institute (GWI)** provides training in the development of grant proposals for early stage investigators through seminars, individual meetings, assignments, and anticipated outcomes. It is offered every Spring semester, and faculty participants are provided a course release during that term to allow them protected time to participate and develop their grant proposal for submission.

**The Child Development Research Center**

The Child Development Research Center (CDRC) is a state-of-the-art, 64,000 square foot research facility that offers opportunities for the College of Human and Environmental Science faculty and researchers across the University, state, region, and nation to conduct interdisciplinary research relating to children and families. This research facility is equipped with the latest multi-media research technology, seven large research suites, and eight research rooms with adjoining observation booths. Components include diagnostics, clinical treatment, prescribed interventions, demonstrated education, and empirical research contributing to the associated bodies of knowledge. The CDRC houses the Children’s Program, a NAEYC accredited laboratory school enrolling up to 120 students ages two months to five years; as well as Child Development Resources, West-Central Alabama′s resource for information about the well-being of young children, including management of a child care subsidy program, training for professional child care providers, child care resource and referral information, and parenting education and support programs. Other programs that are housed in the CDRC include:

* Parenting Assistance Line (PAL), a service of the University of Alabama to provide helpful information on parenting issues to Alabama citizens via toll-free phone or written information
* Capstone Family Therapy Clinic, a University and community service helping to resolve personal problems and to train graduate students specializing in marriage and family therapy

**CHES Department-based resources**

**Department of Clothing, Textiles, and Interior Design - Facilities and Resources**

The College of Human Environmental Sciences provides facilities and equipment for students to achieve success in retail merchandising, apparel design, and interior design. Each program has appropriately furnished studio/labs and lecture facilities in the College. Apparel design has two large light-filled studios on the 3rd floor of Doster Hall, containing dress forms, both regular and industrial sewing machines as well as sergers, ironing and steaming equipment, and moveable work tables for cutting and pattern work.

Interior design has four studio/labs in Doster including a technology lab with integrated drafting tables and computers and a lighting studio/lab. The interior design studios in Doster 02, 05, and 208 have drafting tables, podiums with computer, projector, overhead cameras, pin up and display space. Doster 208 has a specially designed closet to accommodate the student work for accreditation review. Faculty have access to studio space at all times and have office space to perform their duties and meet with students. A suite for the interior design faculty supports offices, a work space, a common gathering space for meetings, and a small library.

The Fashion Archive is a collection of historic and contemporary fashion that contains over 5,000 objects of dress dating from the early 1800s to present day. It also houses the Comer European Textile Collection (15th Century - 19th Century textile fragments), books, fashion plates, magazines, and photographs.

It includes a photography studio, research facility, and space for shows and display. The department owns lighting equipment and flexible space for teaching students how to photograph their work as well as create professional head shots and portfolio images, shoot their creative work on live models or mannequins, create videos, and live stream in a seamless environment. The programs in the department are accredited by the Council for Interior Design Accreditation (CIDA) and the National Association of Schools for Art and Design (NASAD). Faculty research ranges from work on extracting fiber from bamboo for textiles to historic costume conservation

**Department of Health Science - Facilities and Resources**

The Department of Health is one of five departments in the College of Human Environmental Sciences at The University of Alabama. Department faculty actively participate in research pertaining to athletic training and community and public health. The Department currently has 22 full-time faculty members (17 public health/health promotion and 5 athletic training faculty) and two full-time staff members. Faculty members conduct interdisciplinary research in the two programmatic areas and have content expertise in health equity/disparities, concussions and traumatic brain injury, cancer prevention, program evaluation, sleep behavior, obesity, substance use/misuse, and sexual health among other research areas. The Department offers academic degrees in the following programs: B.S. in Public Health, B.S. in Athletic Training, M.A. in Health Studies, M.S. in Athletic Training, Master of Public Health (M.P.H.), and a Ph.D. in Health Education and Promotion.

The Department of Health Science occupies space of excellent quality for research and teaching in Russell Hall and Capital Hall. The Department’s public health/health promotion faculty and staff are located in a newly renovated space in Russell Hall. The public health space in Russell Hall consists of individual faculty offices, a Graduate Assistant suite (which has 10 work/computer stations), and a dedicated conference room, and a research collaboration room. The Department’s athletic training faculty and staff are located in Capital Hall. Newly renovated, the Athletic Training suite provides individual faculty offices, a graduate assistant suite, a large research lab, skills labs, classrooms, a conference room, and other spaces that are also conducive to research and collaboration.

The Department of Health Science has the latest technologies in each office, classroom, and lab. Each faculty, staff, and Graduate Assistant is provided individual computers that are upgraded with the latest versions of SAS and SPSS software. When requested, faculty also have access to additional software programs, such as NVivo, a qualitative software program. Standard computers have Microsoft Office Suite, statistical packages, access to the library-sponsored database system for literature searches, and access to the online catalog. Online access to MEDLINE, CINAHL, PUBMED, and several other health-related databases are available.

**Department of Human Nutrition and Hospitality Management –**

**Nutrition Facilities and Resources**

The Nutrition and Metabolism Research Lab**, t**he Foods Lab, and the Sensory Science Lab are collaborative lab spaces designed to maximize research quality and efficiency. There are several distinct, yet interconnected, areas within the labs, such that researchers and their study participants can complete all aspects of the research protocol without having to travel to multiple facilities. Biological samples can be collected and immediately analyzed or stored on-site, thereby decreasing likelihood of sample loss or quality deterioration from having to ship samples elsewhere for analyses. Distinct areas of the Nutrition and Metabolism Research Lab include: clinical areas for state-of-the-art robust assessments of body composition, measurement of metabolic rate, and a phlebotomy room and restroom each with a pass-through window to deliver biological samples directly into the analysis lab; community areas with focus group rooms for feeding studies, community education, and large-group nutrition interventions; and a state-of-the-art bench research lab with instrumentation to separate and quantitate bioactive compounds in food and biosamples. Additionally, the Foods Lab and Sensory Science Lab contain lighting- and temperature-controlled sensory lab designed with five testing booths and pass through windows from the Foods Lab to allow for sensory evaluation. Each booth is equipped with tablets running SIMS Sensory Computer Systems (Berkley Heights, NJ) to allow for presentation of randomized samples for sensory analysis.

Specific analyses that can be completed:

**Physiological Outcome Measures**

* Air displacement plethysmography (BOD POD) for a gold-standard assessment of fat mass and fat-free mass
* Dual Energy X-Ray Absorptiometry (DXA) for measurement of fat mass, bone-free lean mass, and bone mineral content
* Bioelectrical impedance analysis for estimation of total and segmental fat mass and fat-free mass
* Pulse wave velocity and pulse wave analysis for estimation of arterial stiffness
* Brachial artery flow-mediated dilation for assessment of vasodilation
* Twenty-four hour ambulatory blood pressure monitoring
* Indirect calorimetry for measurement of resting energy expenditure and substrate utilization

**Dietary Intake Assessment**

* Researchers are trained in multiple methods of dietary intake assessment including 3-day food records, 24-hour recalls using multiple pass methodology, and food frequency questionnaires.
* Diet and recipe analyses are available using Nutrition Data System for Research (NDS-R) and can provide nutrient information on >100 parameters for specific foods, overall nutrition intake, and information on dietary patterns.

**Clinical, Biochemical, and Molecular Nutrition and Food Analysis**

The analytical lab is equipped with instrumentation for the separation and quantitation of bioactive compounds in biological samples and food as well as for the physicochemical characterization of food components and structures. Analytical capabilities include assessment of the following outcome measures in human, animal, and food samples:

* amino acid and protein profile analyses
* redox biomarkers
* phytochemical analysis
* vitamin and mineral bioavailability and metabolism
* nitrate-nitrite metabolism as a substrate pool for nitric oxide and vasodilation
* adipose tissue analyses for deposition of bioactive compounds
* primary neuronal culture
* immunoblotting and immunoprecipitation
* cell viability and toxicity assay
* immunocytochemistry and microscopy
* food chemical composition: moisture, carbohydrate (starch, fiber, sugar), phenolics, vitamins, carotenoids, antioxidant capacity, etc.
* physical properties: hardness, color, particle size and distribution, etc.
* physicochemical properties: state/phase transition, stability of food materials, etc.
* simulated in vitro digestion: salivary, gastric, and intestinal.

**Mathematical Modeling**

Software for mathematical modeling and statistical analysis includes:

* WinSAAM, the Windows version of Simulation, Analysis, and Modeling program, is the primary software for model-based compartmental analyses.
* SAAM II, Simulation, Analysis and Modeling software II, is currently the fastest and most accurate way to create models, simulate experiments and analyze kinetic data.
* STATA13, GraphPad Prism6, KaleidaGraph, and OriginLab are available for statistical analysis.