

## FACILITIES AND OTHER RESOURCES

### Expansions and Renovations:

In the last five years, the University of West Alabama has invested nearly \$20 million in modernizing its' research and educational facilities. This investment includes:

1. The purchase and renovation of the former Livingston High School facilities to now host the UWA Julia Tutwiler College of Education. This expansion of the College of Education has allowed for designated space for research in Active Learning via an Active Learning Center Grant from Steelcase Education. The new facilities have also given a new home to the Center for Excellence in Teaching. Research is now being conducted on the application of active, inquiry based learning in higher education.
2. The relocation of the College of Education also allowed for the expansion of the College of Natural Sciences and Mathematics(NSM) to now occupy Bibb Graves in its entirety. This new space for NSM doubled the number of laboratories and teaching facilities within the college to now include:
  - a. A new, state of the art 2,000 square feet Molecular Biology Laboratory.
  - b. A new 1,225 square feet Conservation Genomics laboratory.
  - c. An expanded and renovated University Herbarium hosting rare Alabama plants.
  - d. A renovated Ecology laboratory.
  - e. A renovated greenhouse and the adjacent preparation building.
3. Construction of a new state of the art athletic training center that is home to a physiology laboratory.
4. Renovation of Spieth Hall dedicating two floors (over 10,000 square feet of office and laboratory space) to the Division of Nursing allowing them to expand their program. This renovation includes another 5,000 square feet for the biobehavioral research program in the Department of Social Sciences.

Each year, UWA is hiring new faculty members with increased interest and expertise in research, as indicated by the increasing number of research grants submitted in recent years. UWA currently employs 121 faculty, 78% of whom hold terminal degrees in their discipline. UWA has 55 faculty members in the biomedical/biobehavioral science disciplines, of which 43 (78%) hold a terminal degree. Of those 55, only ten have received funding for their research projects. UWA currently has five active research grants with faculty serving as Principal or Co-Investigators. No UWA faculty member has ever received, nor is a current recipient, of external funding from the National Institutes of Health.

### Facilities and Equipment:

#### *College of Natural Sciences and Mathematics:*

*Laboratories.* There are two brand new fully equipped facilities in NSM:

- a. The Molecular Biology Laboratory that specialized in plant-fungal interactions is a 2,000 sqft laboratory. This laboratory has the equipment and resources needed to execute quality research, including all the equipment necessary for the molecular and biochemical studies of plants and fungi. The lab staffs 12 graduate and undergraduate researchers. This laboratory has the following equipment:

-80°C freezer

a -20°C freezer

Two-chromatography refrigerator

A 20ft<sup>2</sup> Nor-Lake Scientific growth chamber

A biological safety cabinet

A chemical fume hood

Several bench top centrifuges

Two Precision Reciprocal Shakers

Autoclave- Hirayama HV50

An ABI thermal-cycler

Applied Biosystems Veriti Thermal Cycler

Gel electrophoresis equipment

Several heat blocks and water baths  
 Several vortexes and blenders  
 ELISA assay reader  
 Two analytical balances  
 Omega Fluor Plus Imager  
 Microplate Microcentrifuge  
 Reverse Osmosis Water Filtration System  
 Smart2Pure Water Purification System  
 Gene Pulser Xcell Electroporation System  
 Denovix DS-11 Spectrophotometer  
 Ductless Fume Hoods  
 Vertical Laminar Flow hood  
 Speed Vac Plus SC110A  
 Thermoscientific pH/ Conductivity Meter  
 Electronic UV Transilluminator

Universal Vacuum System UVS400  
 Flammable and acid Cabinets  
 Several Bio Rad Power Supplies 300  
 Centrifuge- Biofuge A American Scientific  
 Centrifuge- Fischer accu Spin Micro 17  
 Centrifuge- IEC Centra- 4B  
 Centrifuge- Mini  
 Fischer Scientific Dry Bath Incubator  
 Fisher Isotemp Incubator 25°C  
 Fisher Isotemp Incubator 35°C  
 Fisher Isotemp Incubator 55°C  
 Fisher Vortex Genie 2  
 Qubit Photosynthesis Analyses Systems  
 Many micropipettes, single and multi-channels  
 Nikon 12MP camera

b. The Conservation Genomics Laboratory has the equipment necessary to support information management systems supportive of DNA isolation, PCR, fragment length polymorphism analysis, cycle sequencing, NGS library preparation, massively parallel DNA sequencing, and computational analysis. This includes a 300sqft “clean” molecular laboratory, a 650sqft genomics research laboratory, and a 275sqft living aquatics laboratory. The clean lab is a controlled access facility equipped with ultra-violet lighting for additional contamination control. This laboratory includes the following equipment:

Autoclave	pH Meter
Balance	Power supply
Centrifuge	Quantitative PCR
Centrifuge 5810R	Refrigerator
Disrupter Genie	Speci-Mix
Dry Vac.	Thermo Cycler
Freezer	Transilluminator
Electrophoresis System	Vortex Mixer
Genetic Analyzer	Water Bath
PCR	Ion-sensing DNA sequencer

NSM is also home to three other newly renovated and updated lab spaces:

- a. An expanded and renovated University Herbarium hosting rare Alabama plants.
- b. A renovated Ecology laboratory.
- c. A renovated greenhouse and the adjacent preparation building

*Offices, computers and support staff.* The College of Natural Science and Mathematics maintains 12 offices with an average space of 100sqft, for each faculty member. Every office is equipped with a desktop computer and a printer. Computers are equipped with basic word-processing programs, special image, and statistical analysis software such as Photoshop, ImageJ, JMP, and SigmaPlot 12. In addition,

Phylogenetic and genomic software are installed to facilitate courses in molecular biology and bioinformatics. There is abundant hard drive space on the UWA server accessible by NSM faculty. The College of Natural Sciences and Mathematics also maintains a state-of-the-art computer-teaching laboratory, equipped with 32 new Dell PCs and laser printers. The College has one conference room equipped with technology needed for conference calls and presentations. The College has three copy/printer machines, one color and two black and white. The College main office has two secretaries who perform various administrative and faculty support functions. Finally, the department has fully integrated wireless internet access and Voice Over Internet Protocol in all offices, classrooms and laboratories.

***Department of Behavioral Sciences:***

*Offices, computers and support staff.* The department has 10 offices for faculty consuming an average space 200sqft each, with all the offices equipped with computers, basic word processing programs and statistical analysis software such as IBM, SPSS and other statistical software packaging programs. There is an adequate amount of hard drive space available on the University of West Alabama server that is accessible by faculty. Additionally, the conference rooms have appropriate technology for conference calls and presentations. The department has one copy/printer machine that is black and white. The department office is staffed with one secretary who performs various administrative and faculty support functions. Additionally, the department has five work-study students. In all offices, classrooms, and laboratories, there is fully integrated wireless internet access.

***Department of Sports Medicine and Exercise Science:***

*Laboratories.* The Department houses a 1,500 square feet exercise physiology laboratory and mixed use classroom. This facility is a product of the recent Homer Field house expansion, which was completed in July 2014. The Department recently purchased a ParvoMedics TrueOne metabolic cart for use in human subjects' research and as a student training tool (\$25,000). The department is also home to an exercise science laboratory as well as home to Champion Sports Medicine in Livingston which operates as a satellite clinic for E. Lyle Cain, Jr., M.D. and other physicians from Andrews Sports Medicine and Orthopedic Center of Birmingham. Athletic Trainers (ATs) are health care professionals who collaborate with physicians to provide preventative services, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions. Students who want to become certified athletic trainers must earn a degree from an accredited athletic training curriculum. Accredited programs include formal instruction in areas such as injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, therapeutic modalities, and nutrition.

*Office space and teaching space.* In addition, the Department has four program specific teaching classrooms, one conference room, and four faculty offices that are fully equipped with computers, printers and other necessary office items.

***The Athletic Training and Sports Medicine Center:***

The Center is home to four faculty members conducting research in the biomedical field, with an increased number of faculty that are involved in research programs in collaboration with other universities. The services offered in the Center are available to UWA students, faculty, staff, and patients in the UWA Service area including students and patients from over 60 schools from the 12 Alabama and

6 Mississippi surrounding counties. In addition, the equipment and resources available in the Center include:

- |                                             |                                       |
|---------------------------------------------|---------------------------------------|
| Three Lange Skinfold calipers               | Multiple goniometers                  |
| Three Hand Grip Dynamometer                 | Vista VO2 gas analyzer                |
| Two Bioelectrical Impedance Analyzers       | Two Seca height and weight scales     |
| Two Monarch Cycles                          | Mac 1200 portable 12 lead ECG         |
| TrackMaster treadmill                       | Tandem vertical leap analyzer         |
| Three sit and reach flexibility boxes       | Multiple Polar heart rate monitors    |
| Multiple stethoscopes and sphygmomanometers | Blood glucose and cholesterol testing |
| Two examination tables                      |                                       |

***UWA Office of Sponsored Programs & Research (OSPR):***

The UWA OSPR is staffed with four research administration professionals’ working in all areas of research administration including pre-award, post-award, and compliance.

Some of the service provided by the Office of Sponsored Programs and Research are:

- | <u>Pre Award Services</u>            | <u>Post Award Services</u>                                  | <u>Compliance Services</u>        |
|--------------------------------------|-------------------------------------------------------------|-----------------------------------|
| • Locating Funding Sources           | • Time & Effort Tracking                                    | • Institutional Review Board      |
| • Grant Development Oversight        | • Guidance with Allowable & Unallowable Expenses/Activities | • Scientific Misconduct           |
| • Grant Submissions                  | • Grant Modifications and Extension Request                 | • Animal Care and Use             |
| • Professional Development           | • Grant Expenditure Updates with PIs & Deans                | • Intellectual Property           |
| • Budget Development                 | • Reporting Assistances                                     | • Conflicts of Interest           |
| • Facilitates Community Partnerships |                                                             | • Responsible Conduct of Research |
| • Research & Data Collection         |                                                             | • Export Control                  |
|                                      |                                                             | • Biosafety/Biosecurity           |

The staff are collegial and professional and interact extensively, frequently, and well with each other, as well as with all faculty and staff from across campus. The office encourages projects focused on research, special projects and public service and outreach. In addition, the office provides faculty and staff with professional development workshops and trainings that promote grant writing and application submission. OSPR supports faculty and staff in locating funding opportunities and pre- and post-award administration of externally funded grants and contracts. The office ensures compliance with the requirements established by Federal and State laws, sponsor rules and regulations, and University policies and procedures. In the past two years, OSPR has assisted faculty in securing first time funding from the following Federal agencies: Department of Labor, National Science Foundation (four awards), Department of Health and Human Services, U.S. Department of Agriculture, and U.S. Department of State (Internationalization Grant). Figure 1 summarizes the organizational structure of OSPR.