



## State University System Research

# Research Laboratory and Equipment Utilization

## Laboratory and Equipment Utilization

Research that occurs in a university setting has dramatically increased in recent years, in both volume and method. The state universities were queried during June 2007 regarding the utilization and sharing of research equipment and research laboratories in response to questions expressed by the Board of Governors Research and Economic Development Committee. Information was requested regarding specific policies and procedures that are in place at the universities for the sharing of research laboratories and research equipment among faculty at the university and with faculty at other institutions.

### Survey Findings

All eleven state universities reported that there is regular and routine sharing of research laboratories and equipment among faculty and among institutions, although no explicit written policies exist. Examples are provided below.

**Florida Atlantic University** reports that resource sharing regularly occurs and is handled on an individual, case-by-case basis. While noting that cutting-edge research requires cutting-edge equipment and facilities, the wide geographic coverage of the university's campuses often make the sharing of equipment among centers and departments not feasible. FAU does actively discourage duplication and has developed several user facilities to share and recover costs for particularly large and expensive equipment.

**Florida International University** identified several instances of laboratory and equipment sharing in departments such as Physics, Chemistry, Biology, and Engineering. This use includes some of the core laboratories, by researchers and students from other institutions, as well as FIU researchers using laboratories and equipment from other institutions. There are also several NSF grants in Physics and Engineering that have this same reciprocal sharing. Department deans and the Office of Research sign off on a required Internal Clearance Form, which contains information on laboratory usage.

At **Florida State University**, research lab space is assigned to individuals by departments and programs on a need basis. Sharing of space occurs as the result of natural research collaborations that occur between principal investigators. Collaboration between researchers not at one's home institution is now the normal method of conducting research globally and is expected to occur. The increased cost of scientific equipment and its maintenance means that most research units maintain core facilities which house big ticket items of equipment not typically found in the individual laboratories of principal investigators. Core facilities are available for use by all faculty, students and postdoctoral fellows, regardless of unit affiliation. The use of these facilities is governed by a Program Advisory Committee whose task it is to set priorities for their use based on scientific merit.

As a primary example, the FSU National High Magnetic Field Laboratory (NHMFL) is chartered by the US Government, has been designated by the National Science Foundation as a national user

facility, and is open to all qualified experimenters. As such, external users (800 per year) visit the NHMFL to conduct research in world-class facilities. Formal policies for the acceptance of research inquiries are in place and the Program Advisory Committee is used to select experiments to be run.

**New College of Florida** reports that research space is extremely limited and that most all laboratory space is utilized for instructional purposes or independent faculty research. The Chair of the Natural Science Division approves all requests for use from external entities.

The **University of Central Florida** Office of Research and Commercialization encourages certain practices among researchers, including shared space and shared equipment. Researchers are encouraged to conduct an equipment inventory search prior to submitting proposals to minimize the duplication of equipment.

The **University of Florida** has approximately 160 approved Centers, Institutes and Bureaus that have been established for the purposes of research and/or education. The sharing of resources (e.g., equipment, labs, etc.) and collaboration is promoted among all centers across departmental and college boundaries. The University has won awards from sponsors like the National Institute of Health and the National Science Foundation that are specifically designed for shared instrumentation.

Each UF college or unit is responsible for access to its facilities and, in practice, often shares with faculty from other units. Further, many units provide access to their capabilities to other universities and external organizations. For example, the Biotechnology Development Incubator provides access to laboratory space to start-up companies, and the Interdisciplinary Center for Biotechnology Research provides laboratory equipment and services to all universities in the state and to other universities at reasonable cost. The Major Analytical Instrumentation Center provides access to modern expensive scientific instruments for researchers at

the University and outside entities, and the High Performance Computing Center provides computational access to researchers both within and outside of the University.

Laboratory assignments at the **University of South Florida** are centered in the departments with oversight by the colleges in order to maximize the use of very limited space. The University reports that most research laboratories are overtaxed and cannot accommodate additional use. Specifically, when USF provides matching funds on a major equipment grant, there is the understanding of both the sponsoring agency and the principal investigators that the equipment will be made available to other USF researchers. USF also has research support services for all faculty that include NMR, electron microscopy, machine shops, and computer laboratories, on a fee-for-service basis.

Formal agreements with hospital affiliates and other institutions also exist that promote collaboration. These memos of understanding include guidelines for services, associated fees, liability assignment, and other specific terms. Additionally, fee structures are in place at USF that allow researchers at other state universities access to instrumentation facilities as a reduced cost.

### Summary

The state universities report that increased collaboration on research projects has been driven by the need to bring together experts with many different areas of expertise to solve problems, in addition to the increased cost of new, frontier equipment. Collaboration is now the way research is carried out and, although no formal policies exist at the state universities, core facilities at each of the universities are used extensively by state university, national and international researchers.

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