<div align="center">**Technology Fee Concept Paper Proposal Template**</div>

Title: Revolutionizing the College of Liberal Arts and Sciences Teaching Laboratory Environment

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Purpose: To provide students and faculty with instructional programs and data from any networked computer using a virtual desktop infrastructure (VDI). This creates a more effective and efficient method of support, while increasing stability.

Impact/Benefit: The College of Liberal Arts and Sciences has several instructional labs supporting over 7000 students per semester. Given the diversity of departments within the College, instructional labs vary greatly in the hardware and software packages required. This customization of hardware and software places enormous demands on college IT personnel, resulting in a significant portion of annual effort being diverted to the maintenance of these resources. Frequent updates to requisite software mean that the standardized build must be refreshed every term, requiring a near-constant effort from numerous personnel to maintain the development cycle for these labs.

We propose a Virtualized Desktop Infrastructure for the teaching labs to mitigate a number these issues.

Benefits to students: access their standardized virtual desktops both on and off-campus. This expands classes beyond the physical limitations of the number of seats provided in the labs. It allows students to run their required programs at any time or the day or night, without being physically in a campus instructional laboratory.

Benefits to faculty: allows customized programs and datasets for each course, yet still provides a standard desktop environment. Discipline-specific programs can be deployed virtually, ensuring all required tools are available for each class.

Benefits to IT: Less effort required to maintain the consistency of the teaching environment. Easier deployment of new and updated applications to the virtual desktops. Individual applications can be customized for each course without concern of conflicts. Centralized storage of lab materials and student content, decreasing local disk usage and security concerns.

Benefits to UF Administration: Hardware replacement cycles and costs for client computers would be reduced or potentially eliminated, resulting in a recurring savings. Reduction of department-specific computing environments, allowing multiple courses to share the same laboratories. The potential exists to provide additional revenue via E-Learning courses.

As a pilot, we propose implementing these changes for the instructional laboratories in the Geography department. The department currently schedules two laboratories with approximately fifty seats. These labs provide access to unique GIS and remote sensing applications required by fifteen courses a semester. This pilot will replace the local desktop environments with a virtual desktop infrastructure, allowing students to complete assignments either in the lab or remotely.

If shown to be an effective replacement for traditional instructional laboratory environments, this model could be expanded to the entire College of Liberal Arts and Sciences, realizing larger cost-savings in hardware costs and faculty and staff effort. In addition, it would offer the college a new means of providing effective, efficient support for additional E-Learning environments, possibly providing additional revenue. While this approach has the potential to revolutionize the way in which CLAS delivers instructional content, it does not represent an untried methodology. IFAS has deployed a similar system, and is using it to reduce costs and increase the efficiency and availability of instruction. CLAS can leverage the technical knowledge of such campus units and reap many of the benefits of this new model of virtualized desktop infrastructure to improve our instructional environments.