

## **Information Systems (Reynolda Campus)**

Information Systems (Reynolda Campus) Information Systems supports University instruction, research, and administrative needs through computing and telecommunications services. The campus computer network offers wired and wireless high-speed connectivity from all campus buildings.

All students on the Reynolda Campus are given a network login ID; the login ID is maintained as long as the student is enrolled. This account provides students with access to networked computer resources such as electronic mail, client-server software packages, various courseware applications, and administrative services. During the 2015-2016 academic year, first year students received a new ThinkPad computer as part of their tuition. ThinkPad model specifications can be found on the Information Systems web site at [help.wfu.edu](http://help.wfu.edu). Standard software for the ThinkPad includes Windows 8, Microsoft Office 365, digital media tools, and Mozilla Firefox. The ThinkPad also has a variety of research, analytical, and development tools, as well as the latest version of Endpoint Protection AntiVirus software. Maintenance and support for the ThinkPad computers is provided on campus through The Bridge, a service center, located on the main floor of the Z. Smith Reynolds Library. Loaner computers are available for students as needed.

Information Systems maintains an extensive array of online resources that support University admissions, student registration, grade processing, payroll administration, finance and accounting services, and many other administrative and academic applications. In addition, the Wake Forest Information Network (WIN) provides the University community with features like faculty, staff, and student directories; online class registration; electronic access to view payroll and tax information; and vehicle registration.

Students also have access to computing resources outside the University. The University is a member of the Inter-University Consortium for Political and Social Research (ICPSR), located at the University of Michigan. Membership in ICPSR provides faculty and students with access to a large library of data files, including public opinion surveys, cross-cultural data, financial data, and complete census data. The University is also a member of EDUCAUSE, a national consortium of colleges and universities concerned with computing issues.

The University's computing resources serve both academic and business needs. Wake Forest's network infrastructure includes a ten gigabit per second Ethernet backbone, a mixture of 100 Megabit and 1 Gigabit per second switched connectivity to the desktop, and pervasive wireless connectivity in all campus buildings. LINUX and Windows-based servers provide for business computing needs and services. A mix of LINUX systems and Windows-based systems provide for messaging, systems management, Internet, intranet, courseware, various research needs, and file and print services. A LINUX supercomputing cluster provides supercomputing services for math, computer science, physics, and other scientific research applications. These systems are available to students, faculty, and staff 24 hours a day through the Wake Forest University network or over the Internet. All connections are protected by VPN and firewalls.

Programming languages available on the various academic computing systems include C, C++, Java, Perl, Python, Tcl/Tk, Fortran77 and Objective C/Swift for iPad/iTouch programming. Students are exposed to a variety of operating systems through virtualization. Students, faculty and staff have access to a large variety of instructional, classroom, and research resources through the campus network including the online catalog, databases, and electronic journals provided by the Z. Smith Reynolds Library.

Many departments on campus have their own computing resources in addition to those available through the Information Systems Department. The Digital Media Lab, located on the main floor of the Z. Smith Reynolds Library, offers additional technology resources. In addition to the tools provided by Wake Forest, the Department of Mathematics and Statistics has a server made available to students that may need more computational power to run programs such as Maple, Mathematica, MatLab, SAS, SPSS and a full suite of GNU compiler tools.

Through the use of operating system virtualization, the Department of Computer Science is able to offer a unique set of software tools that allow students to experience the nuances of various operating systems. Depending on the class, students may find themselves working on one of the many varieties of UNIX that are available in today's marketplace. These may include Ubuntu, Debian and Red Hat Linux as well as Oracle Solaris 11. Students also have access to various mobile platforms including the iPad, iPhone and Android platform. In addition students have access to 16 GPU servers (Graphics Processing Units) utilized in classes teaching CUDA stream programming. The CS Department also has a MakerBot 3D printer and multiple Raspberry Pi computers, tablets, sensors, and Roomba iCreate robots, to name a few, all for students to use and explore in various "STEM" classes.

Students and faculty have access to the Wake Forest DEAC Cluster, a high performance Linux cluster with 271 nodes with 3100+ processor cores with 20TB of RAM, limited Infiniband connectivity, and 92TB of storage. The Wake Forest DEAC cluster currently offers the computational research community a wide variety of commercial scientific software as well as open source middleware necessary to effectively and efficiently utilize the high performance computing cluster. Many campus wide licensed software packages available on the Wake Forest issued laptops are available on the cluster as well. Currently, researchers on the cluster have dedicated access to: any Red Hat Enterprise Linux 6 provided software; Fortran 77 and Fortran 90 compilers from Intel, a variety of MPI implementations (Open MPI, MPICH2 from Argonne National Lab, MVAPICH2 from Ohio State University, and commercial software packages such as Matlab R2015b, Maple18, Mathematica10.3 and ITT IDL.

All Residence hall rooms are equipped with cable TV programming and the capability for VoIP technology. Cable television, while providing a recreational outlet, plays an important role by providing access to campus information and educational offerings. Information Systems also offers 142 channels of CATV service to include 68 select HDTV channels and 44 music channels to students in residence halls.

Information Systems provides assistance online at [help.wfu.edu](http://help.wfu.edu), by telephone at 336-758-HELP (4357) and supports walk-in customers at The Bridge located on the main floor of the Z. Smith Reynolds Library. The Bridge provides assistance with information technology services including computer repair, software access, equipment loans, and purchases. The Bridge is a partnership of the Z. Smith Reynolds Library and Information Systems. Hours of operation are posted online at [help.wfu.edu/hours](http://help.wfu.edu/hours). Students have 24-hour access to online support resources at [help.wfu.edu](http://help.wfu.edu).

More than 50 students are involved in Information Systems student technology programs. Students work in a number of settings that include providing direct support for students, faculty, and staff.

## **Libraries**

The libraries of Wake Forest University support instruction and research at the undergraduate level and in the disciplines awarding graduate degrees. The libraries of the University hold membership in the Association of Southeastern Research Libraries. They rank among the top libraries in the Southeast in expenditures per student.

The Wake Forest University libraries include the Z. Smith Reynolds (ZSR) Library, which is located on the Reynolda Campus and supports the undergraduate College, the Wake Forest School of Business programs, the Graduate School of Arts and Sciences, and the School of Divinity. The Professional Center Library, housed in the Worrell Professional Center on the Reynolda Campus, serves the School of Law. The Coy C. Carpenter Library serves the Wake Forest School of Medicine and is located on the Bowman Gray Campus.

The three library collections total over 2.5 million titles, including more than 50,000 electronic journals as well as e-books and streaming media. The ZSR Library serves as a congressionally designated selective federal depository. The Professional Center Library holds nearly 180,000 volumes and the Coy C. Carpenter Library holds nearly 150,000 volumes. The three libraries share an online catalog, which also provides access to electronic resources, journals and databases. Through interlibrary loan service, students, faculty and staff may obtain materials from other libraries at no charge.

The Z. Smith Reynolds Library provides comprehensive reference and research services in-person and online. Subject specialist library faculty work with individual classes across the disciplines on research papers and one-on-one with students at all phases of the research process. Library faculty also teach elective courses in the fundamentals of research and information literacy and upper-level courses geared towards research in the disciplines.

Special Collections & Archives (SCA) in Z. Smith Reynolds Library is the repository for the Baptist Historical Collection of North Carolina (also known as the Ethel Taylor Crittenden Collection), Manuscripts, Rare Books, and the University Archives. The Baptist Historical Collection contains significant books, periodicals, manuscripts, and church records relating to North Carolina Baptists, as well as the personal papers of prominent ministers, educators, and government officials with ties to Wake Forest. SCA's Manuscripts include the papers of alumnus Harold Hayes, editor of *Esquire* magazine in the 1960s–1970s, the Maya Angelou works for theater, television and screen, and the records of the Dolmen Press. The Rare Book Collection, greatly enhanced by the donation of rare and fine books of the late Charles H. Babcock, emphasizes American and British authors of the 19th and 20th centuries. Among the collections are works of Mark Twain, Gertrude Stein, William Butler Yeats, T.S. Eliot and publications of the Hogarth Press. SCA maintains the University Archives which serves as the primary repository for the historical records of Wake Forest University. The University Archives collects, describes, preserves and exhibits University records that contain historical, administrative, legal, or fiscal value. The records include documentation of the student experience, departmental records, and the papers of faculty and alumni. All are welcome to use SCA collections, many of which are available online, and to visit the Research Room, which hosts frequent and changing exhibits.

Facilities in the Z. Smith Reynolds Library include “The Bridge,” a collaborative service between Information Systems and the library. Faculty, students, and staff can bring their University-issued laptops for repair. An assortment of technology devices is available for checkout. The library has ten group study rooms that are equipped with SMART Board technology. These rooms can be booked online at [zsr.wfu.edu/studyrooms](http://zsr.wfu.edu/studyrooms). Multimedia computers are available on the fourth floor and Media viewing stations are available in Reynolds Wing Room 403. The Writing Center is located in the library, and faculty and tutors are accessible to students throughout their writing process. The library has a 118-seat auditorium for use by Wake Forest community groups for programs, lectures, and film screenings. There is also the ZieSta Room, a space for students to take a break from studying to nap or rest in comfortable loungers.

The library is open continuously during the fall and spring semesters 24 hours a day from Sunday through Thursday. When the library is not on its 24-hour schedule, two 24-hour study rooms are available located near the entrance to the library that may be accessed by keycard. The study room on one side houses a Starbucks. A full description of the Z. Smith Reynolds Library resources and services is found at <http://zsr.wfu.edu>.