

INFORMATION TECHNOLOGY

INFORMATION TECHNOLOGY UNIT (ITU)

The Information Technology Unit (ITU) of George Mason University is comprised of three major IT divisions and offices that provide the ITU with finance and administrative support. The IT divisions are the Division of Instructional Technology (DoIT), the Technology Systems Division (TSD), and the ITU Security and Project Management Office. The first two IT divisions provide technology leadership for the university as well as technology support for students, faculty, and staff. Their services are available on-site, via phone, internet, or in person at the ITU Support Center, which is located in Innovation Hall. The third IT division provides professional project management support to the ITU as well as cyber security services and support to the entire university. It also manages the Patriot Computer Store, which is both a retail outlet and a university service center.

The ITU personnel is comprised of:

- 83 administrative and professional faculty;
- 266 support personnel;
- 11 graduate research assistants; and
- 282 part-time student assistants and wage employees.

INFORMATION TECHNOLOGY UNIT PARTNERSHIPS

The ITU partners with the following consortia and corporations in order to provide services that are as efficient as possible while meeting the needs of the ITU's constituencies.

- Blackboard
- Campus Computer Resellers Alliance
- Cisco
- Cogent
- Digital Media Task Force
- DocuShare by Xerox
- Educause
- Electronic Campus of Virginia (ECVA)
- Ellucian
- 4-VA
- IBM Cloud Academy
- Internet2
- Macrovision
- Microsoft
- MicroStrategy
- Mid-Atlantic Research Infrastructure Alliance (MARIA)
- National Lambda Rail
- National Science Foundation Public Affairs Office
- Oracle
- Southeastern Universities Research Association
- VA SCAN
- Virtual Library of Virginia (VIVA)
- Washington-Area Consortium of Universities
- Washington Research Library Consortium (WRLC)
- Zayo

Division of Instructional Technology (DoIT)

The Division of Instructional Technology (DoIT) fosters and supports the university community in the use of technology for research, teaching, and learning. The division is organized into the following major departments: Classroom and Lab Technologies, Educational Media Services, and Learning Support Services.

Key Accomplishments of the DoIT, 2012–2013:

Classroom and Lab Technologies

- Supported 228,714 computer lab visits.
- Supported 4,688 projector checkouts and 2,696 laptop checkouts.
- Maintained a total of 176 technology enhanced classrooms.
- Supported over 3,500 unique users and made 33,135 reservations in the Virtual Computing Lab, a 112% increase and 149% increase, respectively, from last year.

Educational Media Services

- Supported 61 video enhanced courses that accommodated 4,122 student enrollments.
- Provided a live stream of GMU-TV's broadcast (viewed 482,426 times, a 0.7% increase over last year) and video on demand services (files played 93,796 times, a 123% increase from last year).
- George Mason University's 2012 Team Excellence Award awarded to Collaborative Video Technologies.
- Hosted nearly 1,400 videoconferencing and telepresence sessions, a 30% increase from last year.

Learning Support Services

- Successfully managed training workshops for migration to the Office 365 email client.
- Rolled out an enhanced appearance to the myMason Portal, Organizations, and Blackboard 9.1 and new features with Service Pack 11.
- Unveiled the new Game Design Lab in the STAR Lab.
- Supported 697 users of Skillport who accessed 1,549 distinct courses.
- Hosted 985 scheduled instructional design consultations with faculty and supported 99 courses.
- Supported approximately 40,000 active users of Blackboard 9.1.
- Created approximately 708 Collaborate sessions each month (8,501 in total).
- Reached highest unique users of the Blackboard Mobile Learn app in May 2013 with 11,357.
- Managed more than 600 PBWorks sites each month and reached highest total number of sites supported in May 2013 with 676 sites and highest total users in March 2013 with 10,201 students and faculty.
- Taught 495 training sessions and workshops for 1,940 participants.
- Supported 5,893 users at the CLUB (includes conference room events).
- Proctored 308 exams, a 79% increase from last year.
- Supported 12,738 student visits to the STAR Lab, a 15% increase from last year.

Technology Systems Division (TSD)

The mission of the Technology Systems Division (TSD) is to provide a broad range of core infrastructure services to the university community, including:

- Robust and reliable networks that provide data, voice, and CATV systems on campus, and access to campus data services for off-campus users.
- A university Data Center that is professionally staffed 24 hours-per-day, 365 days-per-year.
- 24-hour self-service access for faculty, staff, and students to the university's administrative system (exception: Sunday 7-11am).

- Central and distributed information systems, applications, and associated databases.
- Enterprise servers and systems for administrative support, academic research/instruction, and electronic messaging, with appropriate security, engineering, systems administration, backup, and disaster recovery.
- A central Support Center (Help Desk) that provides information and assistance to users of technology at Mason.

Key Accomplishments of the TSD, 2012–2013:

Database Application Services

- Enhanced weekly update of Mason Alert System using web services, ensuring new faculty, staff, and students receive Mason Alerts.
- Concluded RFP process for BI tool and selected Microstrategy. Started the implementation of the new BI tool.
- Procured and started the implementation of Opnet Application Performance Monitor.
- Concluded RFP process to select Cloud-based hosting for Mason's enterprise Content Management System. Selected Figleaf and started work on migration process.
- Concluded consulting engagement with Gartner Group to define Cloud Computing challenges at Mason and devise a strategy for the future.
- With Registrar's Office, deployed Banner DegreeWorks.
- With Provost's Office, deployed QNOMY software as part of Enrollment Central.
- With Office of Disability Services, implemented Clockwork scheduling and workflow software.
- Redesigned UPIC (University Process Improvement Council) data collection site.
- Redesigned and implemented enhanced process for off-boarding accounts for Mason administrative applications.

Network Engineering and Technology

- Increased Wireless system capacity to support a maximum of 3,225 access points. This was done with controller upgrades, moving from (13) WISM1 to (6) WISM2 controllers and management system upgrades. The new system now supports advanced feature sets, such as Application Visibility Control and Bonjour Gateway Services.
- Upgraded or installed approximately 600 new wireless access points with 802.11n support across all three campuses.
- Renovated the Commerce building, replacing interior cabling infrastructure with Category 6 Copper and Optical Fiber. Upgraded the connection to Fairfax campus to a 10Gbps circuit over dark fiber leased from Zayo. Installed new equipment, including a new building router, new switches, and new wireless access points.
- Opened Exploratory Hall, a combination of renovation and new construction around the former Science and Technology buildings. The renovations include new cabling infrastructure and new equipment, including a building router, switches, and wireless access points.
- Upgraded Presidents' Park, installing 12 new switches, each with a 10Gbps link into the core network.
- Decommissioned the Truland building in Arlington, removing all equipment, including switches, backup power supplies, and wireless access points.
- Completed construction linking the Metropolitan building at the Arlington campus into the campus network infrastructure and reconfiguring telecommunications plant to conform to the university's specification.
- Completed the Campus Drive duct bank installation and cut-over. This was a multi-stage outside plant construction project affecting the RAC, Mason Inn, West PE module, and all the buildings on the West Campus.
- Installed Contact Center, a new Automatic Call Distribution (ACD) management system now serving the Support Center, Telecommunications Administration, Electronic Classrooms, and several business units outside the ITU.
- Installed Call Pilot, a new voicemail system for the university, currently serving the voicemail and scripting needs of the ACD groups in Contact Center. In the process of converting the 9,336 remaining voicemail boxes at the university.
- Completing the conversion to VoIP, decommissioning legacy telephony switches at Prince William Campus and the Commerce Building. Moved approximately 4,000 lines from the Harris Theater switch (the legacy switch serving Fairfax campus) to new infrastructure.

Enterprise Servers and Messaging

- Completed the migration to the Microsoft cloud service, Office 365, as the new enterprise email and calendaring system for employees. This included the migration of the on premise MEMO (email) and Oracle Corporate Time (calendar) systems to Microsoft Office 365.
- Completed the upgrade of the MasonLive student email system to Microsoft Office 365.
- Installed a second VMware cluster for Unix / Linux platform. This cluster supports the migration from Oracle / Solaris systems into a virtualized Red Hat Linux environment.
- Upgraded MESA storage 111% to 38TB to support continued growth.
- Upgraded the Data Domain backup system, increasing storage capacity and scope of DR replication.
- Completed the selection process for a new Account Management System.
- Established licensing and supporting infrastructure to support campus-wide Red Hat Linux licensing and patch management.
- Deployed new F5 Application Delivery Controllers (ADC) at the Fairfax and DR site to support Active Directory Federation Services.
- Upgraded VCL to run in hybrid hypervisor mode with VMware v5.0. We are now utilizing VMware ESXi and Red hat Linux KVM hypervisors to deploy Windows 7 images.
- Completed VMware colocation system cluster upgrade to v5.0 which eliminates storage size restrictions, provides better performance, and allows for expansion of capacity.
- Organized and directed the Microsoft engagement for the Design and Review of System Center Configuration Manager (SCCM2012) for desktop management services.
- Implemented hardware and software upgrades for System Center Configuration Manager (SCCM 2012), adding new features, capabilities, and allowing for expansion of SCCM services across campus.
- Rolled out password expiration notices, synchronization, and password enforcement for LDAP, Active Directory, and Kerberos.
- Migrated the Blackboard Transaction System (BBTS) services to cloud hosted services.
- Implemented the RMS Student Housing Management Application.

Technology Support Services (TSS)

- Updated and enhanced APC Netbotz, software for use in environmental monitoring and capacity planning in the Aquia Data Center.
- Added additional cold aisle containment systems on the main floor of the Aquia Data Center to improve the operating efficiency of the Computer Room Air Conditioning units and reduce energy usage. The Power Usage Efficiency metric has been improved 247% since the opening of the Data Center in May 2010.
- Research and Colocation hosting in the Aquia Data Center saw an increase in activity and interest during the year, adding an additional 7 customers.
- In collaboration with other units in TSD, DoIT, and the Project Management Office, Advanced Desktop Support defined and enhanced the processes for use of SCCM. SCCM is an enterprise solution for desktop management, imaging and software distribution for Windows Desktops. Working with Microsoft on the configuration, SCCM 2012 was introduced and will be phased in to replace SCCM 2007. This enterprise imaging solution is available to all other departmental lab managers at the university.
- TSS Desktop, DoIT, and TSS Telecom staff successfully assisted with building openings at Mason campuses as well as with numerous moves, requiring the setup of 1,500 pieces of equipment including computers, printers, and telephones.
- TSS Telecom staff installed 1,988 VoIP phones during a project to move from the legacy telephone system to the VoIP system.
- TSS staff opened 42,613 Service Desk incidents and closed 42,876 Service Desk incidents during the year. Service Desk incidents are requests for information & assistance, software assistance, various technical devices installs, break & fix work, and any other technically related activities that customers may request assistance with.
- Maintained a Customer Satisfaction Index Overall rating of 4.8 out of 5 for all of TSS on the Help Desk Institute (HDI) customer surveys. Completed successful “Get Wired” and “ResTech” programs, providing support and guidance in the use of Mason technologies for resident students.

- TSS staff continued to increase the use of remote assistance software, improving service response and increasing efficiency when handling customer support requests.
- Launched Information Technology Service Management (ITSM) Project. The ITSM Project consists of four phases with a three year roadmap and targets the assessment and process improvement requirements for various IT services offered by the ITU. The project team will address gaps identified in the processes required to deliver or perform various IT services and provide recommendations and/or direct support to increase the level of maturity of these processes based on the ITIL framework. In addition, the team will identify new roles (and positions) that, if established, would help the unit achieve process improvements and maintain steady growth to maturity. A final result of the project will be the selection of an ITSM application solution to complement this effort and replace the current Service Desk Express (SDE) application.
- TSS personnel provided major support to the Office365 Email Project, which migrated the long-established Faculty & Staff email system to Microsoft's email solution in the cloud. Staff provided solutions to assist with the migration of local mailboxes, documentation for use, hands on assistance for end users by technicians, remote assistance and phone support from Support Center Analysts and Desktop Technicians, extended Support Center support hours, and various other activities that helped this project be a success.

ITU SECURITY AND PROJECT MANAGEMENT OFFICE

The ITU Security and Project Management Office includes:

- IT Security, which manages a security program that emphasizes awareness through appropriate training opportunities and technical solutions that proactively protect the university's assets.
- ITU Project Management Office, which facilitates project management through the use of the PM Framework and helps ITU managers develop effective project management skills.
- Patriot Computers, the university's on-campus computer store, which manages computer purchases for university departments as well as personal purchases for faculty, staff, and students.

Presentations

- VA SCAN Conference at the Virginia Military Institute in October 2012, presentation by IT Security staff.
- CISO Executive Forum in Washington, DC August 2012, served on the governing body.
- VLA Paraprofessionals Forum in Richmond May 2013, security presentation.
- VLA Paraprofessionals Forum in Richmond May 2013, project management presentation.
- EDUCAUSE National conference in Denver, CO, project management presentations.

IT Security Office

- Member of the Virginia Alliance for Secure Computing and Networking.
- Employed three student interns.
- Held monthly meetings for the Systems Administrators Leadership Team.
- Continued the Departmental Risk Assessment Coordinators program.
- Implemented a malware detection system.
- Held Security Liaison meetings each semester
- Held three Security Liaison information sessions.
- Engaged in consultant assessment of the ITSO.
- Developed informational campaigns on phishing and other security awareness topics.

Project Management Office

- Provided Project Management support to over 40 projects across the ITU.
- Hosted the semiannual ITU Projects Briefings in October 2012 and April 2013.
- Managed and upgraded EPMO, the online project management system, which supports over 30 active IT projects and work sites for eight ITU departments.
- Provided customized project portfolio reports to various management and governance committees.

Patriot Computers

- Hosted a campus-wide technology event for students.
- Hosted an enhanced technology café for parents during new student orientation to provide connectivity and printing options in a convenient location.
- Holds leadership roles within the national organization Campus Computer Resellers Alliance.
- Communicated with all admitted students.
- Completed the “one stop” web site for students.
- Active participant of Fall 2012 Welcome Week.
- Activated an online web store.

TABLE 9.1 Overview of Statistics for the Information Technology Unit, 2010–11 through 2012–13

Unit	2010-11	2011-12	2012-13
Open Computer Labs			
Student Visits	211,827	231,327	228,714
Classroom Equipment Checkout			
AV Equipment Checked Out (Arlington, Fairfax, and Prince William)	6,009	5,209	7,384
Laptops Checked Out	2,263	1,970	2,696
Projectors Checked Out	3,746	3,239	4,688
Desktop Support Services			
Total Tasks Closed	38,043	47,107	41,117
Total Calls Closed	10,529	11,042	11,223
GMU-TV			
Number of Live Viewers	266,963	479,283	482,426
Views of Video on Demand Streaming Files	24,202	42,049	93,796
Students Enrolled in Video Enhanced Courses	4,174	4,486	4,122
Collaborative Learning Hub (CLUB)			
Lab Visits	10,116	7,536	5,893
Instructional Design			
Workshops Offered	17	23	18
Number of Participants	70	134	129
ITU Support Center			
Phone Calls Answered	50,724	48,127	40,473
% Resolved by Support Center	68%	72%	74%
% Calls Answered in Less Than 60 Seconds	94%	94%	96%
Online Learning Resources - Blackboard Courses and Collaborate			
Workshops Offered	118	140	106
Number of Participants	306	587	218
Resident Technicians			
Incidents Closed	954	1,002	1,120
Student Technology Assistance and Resource (STAR) Center			
Student Visits	11,014	11,043	12,738
Training and Certification			
Workshops Taught	384	543	495
Number of Participants	1,223	1,840	1,940
Videoconferencing			
Total Conferences	749	1,072	1,395
Available Bandwidth (Megabits per second)			
General Academic and Administrative Network	1,000Mbps	1,000Mbps	2,000Mbps
Residence Hall Network	2,000Mbps	2,000Mbps	4,000Mbps
Research (Mid-Atlantic Infrastructure Alliance)	2,000Mbps	2,000Mbps	10,000Mbps
SPAM			
Incoming Email	1,245,264,282	1,304,899,269	1,793,776,067
Number of SPAM Emails Caught	1,136,249,574	1,193,899,269	1,677,434,529
Percent of Emails Caught as SPAM	91%	92%	94%

Data Source: Information Technology Unit

TABLE 9.2 General Use Classroom Space Technology Enhancement

	Technology Enhanced Classrooms	General Purpose Classrooms	Total Classrooms	% of Technology Enhanced Classrooms
Arlington*				
2010	28	10	38	74%
2011	40	5	45	89%
2012	40	5	45	89%
2013	41	0	41	100%
Fairfax				
2010	94	53	147	64%
2011	109	44	153	71%
2012	106	36	142	75%
2013	113	35	148	76%
Loudoun				
2010	6	1	7	86%
2011	6	1	7	86%
2012	6	1	7	86%
2013	6	1	7	86%
Prince William				
2010	15	0	15	100%
2011	15	0	15	100%
2012	16	0	16	100%
2013	16	0	16	100%
George Mason Total				
2010	143	64	207	69%
2011	170	50	220	77%
2012	168	42	210	80%
2013	176	36	212	83%

*Arlington campus data (except Hazel Hall data) provided by the registrar; Hazel Hall data provided from Classroom Technology records.
Data Source: Information Technology Unit

THE LIBRARIES

The University Libraries, as a core academic function of George Mason University, serve as both a repository of and digital portal to the wider universe of knowledge. The Libraries foster innovation, originality, and imagination by qualitatively managing access to scholarship and information, providing expert consultation in the research process, and actively teaching the effective and critical use of information.

Mason's library system is comprised of five libraries on three different campuses:

- Charles Rogers Fenwick Library, Fairfax Campus
- George W. Johnson Center Library, Fairfax Campus
- Arlington Campus Library, Arlington Campus
- School of Law Library, Arlington Campus (administered by the School of Law, but services integrated)
- Mercer Library, Prince William Campus

The Libraries are staffed by a dedicated and service-oriented team consisting of:

- 67 professional and administrative faculty
- 85 support personnel
- 13 graduate research assistants
- 35 FTE part-time wage employees and student assistants.

In order to better meet the scholarly information resources needs of the university's growing and diverse academic and research programs, the Libraries are a member of, and active participant in, several regional and national consortia:

- The Virtual Library of Virginia (VIVA)
- The Washington Research Library Consortium (WRLC)
- Association of Southeastern Research Libraries (ASERL)
- Center for Research Libraries (CRL)
- Consortium of South Eastern Law Libraries (COSELL)
- Online Computer Library Center (OCLC)

In addition to the range of customary academic library services, Mason's libraries provide expanded academic support services that include:

- **Data Services** provide expertise in data-rich research through collection and curation of data sets and expertise in their use, statistical research services (quantitative and qualitative analysis), Geographic Information Systems, and government information (federal and state).
- **Gateway Services** provide tutorial modules, curriculum coordinated and integrated instruction focused on undergraduate information fluency skills, and advanced research education methods and strategies.
- **Mason Publishing** is a newly formed unit that matches established library programs with the University's imprint. Services that fall under its purview include:
 - » **Mason Archival Repository Service (MARS)** is a permanent digital archive of scholarship from Mason's faculty and researchers, and digital platform for the Libraries' archival collections.
 - » **University Copyright Resources Office** is a University-wide service that provides guidance for faculty, staff, and students in matters relating to the dissemination and use of knowledge.
 - » **University Dissertation and Thesis Services** is a University resource that assists graduate students in the completion of administrative requirements for submission of theses and dissertations and satisfying external University reporting requirements in this area, and supports Mason's Electronic Theses and Dissertations (ETDs) program.

- **University Records Management** serves as an administrator of the University's records management program pertaining to both paper and electronic formats.

As part of the Libraries' robust Liaison Librarian Program, librarians collaborate and partner with faculty in specific academic programs and departments to provide individualized instructional and research support. Specialized research services include further development of Mason's nationally recognized research portals initiative, acquisition and maintenance of specialized scholarly resources, assistance to individual faculty and faculty teams for research projects, and extensive consultation services to graduate students with thesis or dissertation research.

Further, Liaison Librarians provide a variety of curriculum-based services focused on the educational and research component associated with the scholarly process. These include: course-related, discipline-specific instruction; methodology instruction related to information discovery, evaluation and use; research analysis and data manipulation through specialized software; and research consultations with individual students (undergraduate and graduate) or faculty in need of specific and customized support.

The Libraries' technology-assisted and enhanced services and programs include:

- inPrimo discovery layer linked to Voyager, the online integrated library management system and public access catalog, searches hundreds of millions of scholarly items simultaneously including those locally held as well as resources in Mason's online collections.
- Database Finder, which provides access to a searchable, topical list of databases available to the Mason community.
- Journal Finder, a searchable electronic database that allows users to determine if a journal title is accessible in full-text electronically through the Libraries' resources (currently over 50,000 titles are available).
- E-Reserves, an online course reserves materials module students can remotely access and linked to the University's course management system (Blackboard).
- Research Portals, discipline-specific web-based resources that support Mason's graduate programs.
- Access to more than 1.1M electronic books that users can "check-out" and read remotely.
- iMasonLibraries, a virtual, real-time reference service using instant messaging software, which allows library staff to provide reference service to students, faculty, and staff remotely.
- Online request forms for consortium loan requests (through a consortium of academic libraries in the Washington metropolitan area) and interlibrary loan requests, for books and articles not immediately accessible on-site or electronically.
- An enhanced Special Collections & Archives website that provides access to many different resources, including electronic finding aids, digitized collections, and scholarly portals such as *George Mason University: A History*, *The Brian Lamb Booknotes Collection*, and *Attacking Complex Problems: The Life and Work of Dr. John N. Warfield*.
- Microform to digital format output technology.
- Statistical and qualitative software packages for quantitative and qualitative research, and Geographic Information System (GIS) software offered through the Data Services program.
- Nearly 300 networked computer workstations, with Assistive Technology locations in each library.

Charles Roger Fenwick Library

The Charles Rogers Fenwick Library is the main library of the university. Fenwick's facilities are designed to assist students at all levels—undergraduate and graduate—as they become more sophisticated library and technology users throughout their careers at the university, as well as to facilitate faculty endeavors related to teaching, learning, and research.

Fenwick's holdings include most of the University Libraries' book collections, current and bound journals, Federal and Virginia State Government Documents, maps, and microforms. Fenwick also serves as host to the

libraries' Special Collections and Archives, which provides access and curation to unique scholarly collections in all formats as well as the University Archives, which serves as custodian of these unique and oftentimes fragile materials for future generations, and conducts Mason's Oral History Program.

George W. Johnson Center Library

The primary service area of the George W. Johnson Center Library was conceived as a prototype of an electronic "gateway" library in the 1990s, one that supports information access and research activities through the University Libraries' information technology systems and the World Wide Web.

The Johnson Center Library offers a growing circulating book collection, including the disciplines of music and education, a media collection with a wide range of formats (CDs, DVDs, videotapes, audiotapes, laserdiscs, LPs, and multimedia CD-ROMs), and course reserves (electronic and otherwise) for the Fairfax Campus.

The library now features a prototype of a Learning Commons, and continues to focus on instruction and development of library research skills of undergraduate students.

Arlington Campus Library

The Arlington Campus Library supports the teaching and research needs of non-law Mason students, faculty, and staff on this campus.

The Arlington Campus Library's collections emphasize research materials for the School of Public Policy, the School for Conflict Analysis and Resolution, as well as business, non-profit management, and management of the arts. The library has been a European Union documents depository since the early 1990s.

School of Law Library

The School of Law Library (which is administered by the School of Law, but shares many resources with the University Libraries) combines a strong collection of print and electronic materials with a very experienced staff and a high level of information technology support to ensure that students and faculty have optimal access to all available resources for scholarly study and research. The Law Library's collection consists of over 256,566 print volumes, as well as 223,802 volume-equivalent microforms, and thousands of electronic titles. The Law Library's collection is especially strong in law and economics, business, banking, economic history and theory, intellectual property law, and Virginia law. The Law Library has been a selective federal depository since 1981.

Prince William Campus (Mercer) Library

The Mercer Library in the Occoquan Building serves the academic programs and university partnerships based at the campus, including biosciences, bioinformatics, and biotechnology; computer and information networking; education; nursing; and health, fitness, and recreation services. The library also offers information services to the rapidly expanding corporate and technological presence in the surrounding area.

TABLE 10.1 Overview of Statistics for the University Libraries and School of Law Library, 2010–11 through 2012–13

	2010-11	2011-12	2012-13
Resources			
Volumes (Monographs and Bound Periodical Volumes)	1,353,906	1,425,223	1,453,426
Microforms (includes Government Documents)	3,280,872	3,302,330	3,330,998
Print Periodical Title Subscriptions (includes Government Documents)	10,992	11,019	10,956
Electronic Databases	639	699	811
Electronic Monographs	518,429	874,662	1,152,713
Electronic Journals (includes proceedings) ^{1,2}	68,259	88,066	84,432
Media Collection	47,900	50,404	52,978
Print Government Documents ¹	304,565	306,029	307,165
Maps	214,801	214,818	214,814
Special Collections & Archival Collections	191	200	233
Special Collections & Archival Collections (linear feet)	6,039	6,087	6,253
Services			
Digital Access to Resources and Services ³	~199M	~196M	~210M
Circulation (including renewals)	466,885	426,860	427,779
Print/Media Reserves: Courses ⁴	710	672	349
Print/Media Reserves: Items ⁴	6,658	6,679	11,987
Electronic Reserves: Courses ⁴	645	836	329
Electronic Reserves: Items ⁴	7,651	10,544	4,161
Inter-campus Delivery	4,936	5,436	4,639
WRLC Consortium Loan Service: Borrowed	18,088	15,243	12,634
WRLC Consortium Loan Service: Loaned	31,442	29,259	27,801
Interlibrary Loan: Borrowed	5,869	6,639	6,045
Interlibrary Loan: Loaned	16,341	15,468	15,176
Reference and Directional Transactions	46,241	40,880	42,681
Research Consultations	1,715	2,412	2,032
Instruction: Sessions	888	814	703
Instruction: Number of Participants	11,389	12,314	8,980
Staff			
Administrative and Professional Faculty ⁵	63	66	65
Classified Staff ⁵	81	85	84
Graduate Research Assistants	14	13	11
Student Assistants (FTE)	38	35	37

¹ Does not include School of Law Library holdings.² The large 2011-2012 increase is mainly due to a new acquisition of an electronic proceedings platform.³ Estimated. Includes on-campus and remote "hits." Does not include School of Law Library figures.⁴ Complete data is not available for 2012-2013 and the lowered number represents only a part of the year's actual activity.⁵ Includes Virtual Library of Virginia personnel.

Data Source: University Library