

INFORMATION TECHNOLOGY AND THE LIBRARIES

INFORMATION TECHNOLOGY UNIT (ITU)

The Information Technology Unit (ITU) of George Mason University offers support for students, faculty, and staff in all aspects of their technology needs. The ITU's services are available on-site, via phone and internet, and at the ITU Support Center, which is located in Innovation Hall.

The ITU is comprised of four major units that service four campuses and various off-campus sites:

- Division of Instructional Technology (DoIT)
- Technology Systems Division (TSD)
- Security and Project Management Office
- The Libraries

The ITU at George Mason University is staffed by customer-service oriented experts in technology. This team consists of:

- 79 administrative and professional faculty and 258 support personnel
- 12 graduate research assistants
- 285 FTE part-time student assistants and wage employees

INFORMATION TECHNOLOGY

The ITU teaching enhancement and technology training programs include:

- Advanced Academic Computing
- Classroom Technologies
- Instructional Resource Center
- GMU-TV
- Mason Media Lab
- Student Technology Assistance and Resource (STAR) Center
- Technology Across the Curriculum (in partnership with the College of Humanities and Social Sciences)
- Technology Assistants Program (TAP)
- Training in Office and Productivity Skills (TOPS)
- Videoconferencing

In order to better meet the needs of the university's growing population, the ITU partners with the following consortia and corporations to find solutions to the technology needs of its constituency:

DIVISION OF INSTRUCTIONAL TECHNOLOGY

- | | |
|-----------------------------------|--|
| • AboveNet | • National Lambda Rail |
| • Blackboard | • Skillport |
| • DocuShare by Xerox | • SUN |
| • Educause | • SURA |
| • Internet2 | • Sungard SCT |
| • Macrovision | • VaSCAN |
| • Microsoft | • Verizon |
| • Mid-Atlantic Crossroads GigaPoP | • Washington-Area Consortium of Universities |

The Division of Instructional Technology (DoIT) fosters and supports the University community in the use of technology for research, teaching, and learning.

Advanced Academic Computing

The Advanced Academic Computing (AAC) unit supports instructional initiatives through the design and integration of advanced technology solutions. AAC is directly responsible for the academic computing labs on the Mason campuses and works to enhance the availability and usefulness of these resources through virtual computing and remote software delivery technologies. AAC also supports other units within the DoIT by researching, integrating, and supporting state of the art technologies to meet any and all academic needs.

Key accomplishments during 2007-2008:

- Produced Mason Virtual Computing Lab (VCL) project charter.
- Established partnerships with key technology manufacturers and obtained large equipment donations in support of virtual computing initiatives.
- Implemented VCL pilot program technical architecture through the integration of several technologies. These technologies include:
 - Sixteen VMWare Servers
 - Three Microsoft Windows 2003 Servers
 - Seventeen Red Hat Linux Servers
 - One Solaris X64 Server
 - Redundant Network Content Filtering and Security Systems
 - Redundant Firewall and Access Control Systems
 - IBM BladeCenter
 - High Performance Gigabit Ethernet Network
 - 3 Gigabit Workgroup SAN
- Worked with other public universities throughout Virginia to obtain additional resources and support for virtual computing initiatives.
- Initiated the project planning for the redesign of computer lab imaging, software packaging, and data communications across all Mason academic computer labs.

Classroom Technologies

Fifteen more technology-enhanced classrooms were added to the University's inventory. All together 44 classrooms were either upgraded to technology-enhanced classrooms, or the technology in the classroom was refreshed and standardized. Across all campuses, 68% of classrooms now have technology.

A new design for classrooms is being tested by faculty. Dubbed the "collaborative classroom," this classroom setup encourages group work and collaboration. The new classroom is allowing for testing of new teaching and learning technologies. Faculty surveys after the first semester of use should be helpful in determining what types of classes are best suited to this type of classroom and will provide information on how we can use this type of classroom to encourage collaboration.

Educational Media Services

Educational Media Services (EdMS) supports the University by creating learning, educational, informational, and promotional content and materials in a variety of media formats and systems. EdMS focuses media production towards support of teaching and learning and provides a media communications and collaboration infrastructure as part of

the overarching learning technology infrastructure of the University. Included under the EdMS umbrella are George Mason University Television (GMU-TV), the Mason Media Lab (MML), Videoconferencing (VC), and Web Content Development.

GMU-TV

GMU-TV is recognized as a leader in education and public interest programming. GMU-TV's mission is to support excellence in learning and teaching by producing quality educational and informational programming. GMU-TV creates:

- telecourses for distributed learning
- short video clips for online learning
- documentary and long-format television programming for use as supplemental classroom material
- video support for faculty research and its promotion
- public-affairs programming promoting community involvement, and
- community programming for public awareness.

Additionally, GMU-TV provides media services that: support the University's faculty, departments, research, staff and students; provide insight into how the university works and its relationship with the Northern Virginia region; promote positive messages about the university; and provide professional training opportunities for Mason students via internships and experiential learning. For more information, visit the GMU-TV web site: <http://gmutv.gmu.edu>.

Key accomplishments during 2007-2008

GMU-TV Awards

"Motherhood Lost: Making Loss Visible" was accepted and screened at the Society for Visual Anthropology and American Anthropological Association Film Festival.

2007 Davey Silver

Studio A Ron Maxwell

Studio A Show Open

Motherhood Lost "Combating Criminalization of Stillbirth and Miscarriage"

Videographers

Award of Excellence – Studio A Barry Sisson

Award of Distinction – Comm 355 Editing Aesthetics

Gracie Allen Awards

Studio A – "Caren Cross" – Motherhood Lost - "Combating Criminalization of Stillbirth and Miscarriage"

Telly Awards

2008 Bronze Award: - Studio A Open/Close Animation/Graphics

2008 Bronze Award: - Studio A Open/Close music

2008 Bronze Award: - Comm 355 Editing Aesthetics

2008 Silver Award: - Studio A "Craig Macgowan"

Mason Media Lab

The Mason Media Lab (MML) provides graphic design, animation, and web and game development services for George Mason University. As a facility staffed primarily by students, the MML provides an arena for students to develop and test imaginative concepts in support of the University mission.

Mason Media Lab Accomplishments:

- DVD design and development (Mason ROTC program)
- Website/database design and development (2007 e-Learning Symposium)
- COMPASS program DVD and Booklet design (School of Public Policy)
- Web site design (ARCH lab)
- Designs for mailers, posters, and annual gala (Volgenau School of IT & E)
- Posters, brochures, and mailers (College of Health and Human Services)
- Family Weekend Brochure, Summer and Spring Orientation booklets, and various ads (Office of Orientation)
- Training CD (FAA)
- Poster presentations for 13 conferences and seminars

Videoconferencing

Videoconferencing (VC) supports the infrastructure and programmatic elements of videoconferencing for the university through its Video Network Operations Center (VNOC). VC provides training to technical staff and users and assists departments interested in integrating VC technology into their operations.

Learning Support Services

Key accomplishments during 2007-2008:

Learning Support Services opened the Collaborative Learning Hub (CLUB), a flexible space in which faculty, students, and staff may work together or work with CLUB staff to learn. The space is wireless and includes work stations, MacBooks for in-CLUB use, presentation practice space, videoconferencing, training spaces and movable, re-configurable furniture.

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.

Accomplishments in 2007-2008 include:

Database Application Services

- Upgraded the Mason enterprise system to Banner version 7.4.
- Implemented direct launch to improve Principal Investigator (PI) access to their Finance Reports.

- Implemented process improvements to significantly reduce Finance Data Mart downtime during its noon refresh, giving users more access to their reports.
- Implemented eVA LDI (Luminis Data Integration) between Banner and the Virginia eProcurement system, allowing procurement transactions to automatically flow from the Commonwealth of Virginia e-procurement system to Banner Finance, the Mason repository for finance data. This saves significant staff time by eliminating the need for duplicate entry of purchasing transactions.
- Implemented BlackBoard eLearning LDI (Luminis Data Integration) between Banner and Blackboard Corporate Edition (CE6) eLearning system.

Network Engineering & Technology

- Replaced all core routers on Fairfax campus and upgraded the inter-core connections from one gigabit per second to ten gigabits per second.
- Increased campus Internet connection speed from 150Mbps to 300Mbps and increased student residence hall Internet service from 200Mbps to 300Mbps.
- Added IPv6 capability to Mason's Internet2 router connection.
- Continued to enhance and extend Mason's wireless data network.
- Replaced the aging network access control system ("MUST") in the residence hall network with a new product that should prove to be more reliable and supportable.

Enterprise Servers & Messaging

- Engineered, installed, configured and implemented phase 1 of the Mason IP security camera system based on vendor and end-user requirements.
- Upgraded the 3PAR enterprise SAN (62.4 TB) allowing for significant storage consolidation. This facilitates systems management, enables us to respond quickly to storage requests, saves power by minimizing direct-attached storage arrays, saves energy, and reduces rack/floor space.
- Deployed VMware and Solaris zone technology virtualization over 60 servers. This increases server efficiency, enables us to "stand-up" a virtual server quickly, saves power, saves rack/floor space, and reduces hardware maintenance costs.
- Successfully completed Disaster Recovery (DR) Phase 2 spanning a period of approximately 6 months. Phase 2 included the deployment of Phase 2 components plus a retest of Phase 1 systems.
- Acquired, tested, and deployed the IronPort Messaging Security system that replaced our ailing anti-spam technology. The deployment was virtually seamless, requiring no significant interruption to e-mail operations. This deployment increased system performance dramatically and significantly reduced the volume of SPAM delivered by our e-mail system.
- Engineered, acquired, and installed the Virtual Computer Lab prototype system.

Technology Support Services

- Successfully migrated all users on the ITU supported Novell servers to the Mason Enterprise Services Architecture (MESA).

- Implemented the HDI Survey system to measure customer service in Technology Support Services to identify areas for improvement.
- Established Smartphone support and created a web site to assist users in selecting the appropriate Smartphone and in troubleshooting problems.
- Centralized Restech Program, improving access to ITU support services and accountability in the student housing areas.
- Established an Advanced Desktop Technologies group to provide a higher level of support and to try out new technologies.
- Adopted Green Initiatives – Data Center lights out, Energy Star compliant equipment ordered.
- Improved Support Center Processes for handling of incidents – Phishing attacks, email responses, improved documentation, MESA Support Tool (health check for user accounts).

Information Technology Security and Project Management Office

The ITU Security and Project Management Office includes:

- The Executive Director, who provides guidance, coordination, leadership, and expertise in the areas of IT security, project management, and technology products to meet the needs of students and staff.
- The Director, IT Security, who manages a security program that emphasizes awareness through appropriate training opportunities and technical solutions that proactively protect the University's assets. The Director also coordinates IT security efforts across other ITU departments and provides support to systems administrators throughout the University.
- The IT Project Managers, who facilitate project management and help ITU managers develop effective project management skills. The IT Project Managers are leading the implementation of a formal Project Management Framework to be used throughout the ITU.
- The Manager of Patriot Computers, the University's computer store, who coordinates computer and technology purchases for University faculty, staff, and students.

The Project Management Office coordinates the Semiannual ITU Projects Briefing. These meetings provide an overview of the ITU's major projects, usually numbering around 40, and include detailed presentations on five or six of these projects that have an immediate and pervasive impact on the University community. The Projects Briefing booklet along with other project management resources can be found at <http://pmo.gmu.edu>.

The Director of IT Security participates in the Virginia Alliance for Secure Computing and Networking (VA SCAN). VA SCAN is a collaborative organization made up of four Virginia universities: James Madison, George Mason, the University of Virginia, and Virginia Tech. The organization has been recognized through a Governor's Technology Award.

The Security Office's web site, <http://security.gmu.edu>, contains valuable resources for all users.

TABLE 10.1 Overview of Statistics for the Information Technology Unit, Fiscal Years 2005-2006 Through 2007-2008 (DoIT, Project Office Divisions)

Unit	2005-06	2006-07	2007-08
Academic Labs			
Student Visits	337,289	315,480	308,996
Audio Visual Services			
AV Equipment Checked Out (Arlington, Fairfax, & Prince William)	9,799	9,027	7,958
Desktop Support Services			
Total Tasks Closed	n/a	37,568	38,536
Total Calls Closed	7,850	10,419	9,586
Technology-Enhanced Classrooms			
Total Classes (Arlington, Fairfax, & Prince William)	n/a	n/a	50,748
GMU-TV			
Audience	14 million+	14 million+	40 million+
Distributed Students	4,050	3,426	3,298
Instructional Resource Center (IRC)			
Faculty Consults	985	1,649	2,573
IRC Lab Visits	974	623	n/a
CLUB Lab Visits (1/2 year- CLUB opened 1/08)	n/a	n/a	262
IRC Workshops			
Offered	n/a	n/a	101
Held	n/a	n/a	91
ITU Support Center			
Phone Calls Answered	31,888	35,074	34,828
% Resolved by SC	68%	67%	65%
% Calls Answered in Less Than 60 Seconds	n/a	n/a	95%
Mason Media Lab			
Projects	112	185	158
Student Internships	n/a	n/a	2
Student Related Projects	n/a	n/a	65
Visitors	81	177	n/a
MESA File Servers			
Users	n/a	2,633	4,514
Novell Servers			
Users	2,602	1,029	0
Resident Technicians			
Incidents Closed	1,306	796	1,283
Student Technology Assistance & Resource (STAR) Center			
Student Visits	10,969	10,864	9,012
STAR Workshops	527	320	241
Telecom Administration*			
Work Tasks Opened	20,338	19,717	22,278
Work Tasks Closed	17,204	16,034	28,219
Training in Office Productivity Skills (TOPS)			
Workshops Taught	312	334	305
Participants	1,318	1,497	1,478
Videoconferencing			
Total Conferences	851	1,144	1,085

* Workflow and organizational changes are reflected in this year's numbers for Telecom Administration

TABLE 10.2 General Use Classroom Space Technology Enhancement

	Technology Enhanced Classrooms	General Purpose Classrooms	Total Classrooms	% of Technology Enhanced Classrooms
Arlington				
2005	22	16	38	58
2006	25	13	38	66
2007	23	15	38	61
2008	29	8	37	78
Fairfax				
2005	64	76	140	46
2006	74	71	145	51
2007	78	65	143	55
2008	84	60	144	58
Loudoun				
2005	4	1	5	80
2006	9	1	10	90
2007	6	1	7	86
2008	6	1	7	86
Prince William				
2005	19	5	24	79
2006	19	5	24	79
2007	19	3	22	86
2008	19	0	19	100
George Mason Total				
2005	109	98	207	53
2006	127	90	217	59
2007	126	84	210	60
2008	138	69	207	67

Note: Arlington data provided by the registrar; Hazel Hall data provided from CT Records

THE LIBRARIES

The libraries are a part of the Information Technology Unit (ITU). They offer support for teaching, learning, research, service, and outreach activities of the entire George Mason academic community. The libraries' resources and services are also available to the university's surrounding communities and the general public.

The libraries are comprised of five units 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 within the School of Law)
- Mercer Library, Prince William Campus

Expanded academic support services of the libraries include:

- Educational Services Unit
- Mason Archival Repository Services (MARS)
- Statistical Research Services
- University Copyright Assistance Office
- University Dissertation and Thesis Services
- University Records Management

The libraries' information technology assisted and enhanced services and programs include:

- Voyager, an online library management system and public access catalog.
- The University Libraries' and School of Law Library's websites, which provide access to a variety of networked resources and services.
- iMasonLibraries, a virtual, real-time, reference service using instant messaging software, which allows staff to provide reference service to students, faculty, and staff remotely.
- A searchable electronic journal finder database that allows users to determine if a journal title is accessible in full-text electronically through the libraries' resources (currently over 36,000 titles are available).
- Access to more than 82,000 electronic books that users can "check-out" and read remotely.
- A web-based electronic course reserves materials module students can remotely access.
- Online request forms for intercampus delivery, consortium loan (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 and several online digitized collections.
- Microform to digital format output technology, statistical and qualitative software packages for quantitative and qualitative research, and Geographic Information System (GIS) software.
- Nearly 300 networked computer workstations.

In order to better meet the 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)
- Online Computer Library Center (OCLC)

- Southeastern Library Network (SOLINET)
- Consortium of South Eastern Law Libraries (COSELL) (School of Law Library only)

The libraries of George Mason University are staffed by a dedicated and service-oriented team consisting of:

- 62 administrative and professional faculty, and 78 support personnel
- 12 graduate research assistants
- 29 FTE part-time student assistants and wage employees

Complementing our commitment to information technology for access to and delivery of scholarly content, the Liaison Librarian program matches subject specialist librarians with academic departments, forming a collaborative effort to better develop local collections and electronic resources and support instructional and research activities.

CHARLES ROGERS 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 information 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, special collections and archives, and microforms.

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, one that supports information access and research activities through the University Libraries' information technology systems and the Internet/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.

ARLINGTON CAMPUS LIBRARY

The Arlington Campus Library supports teaching and research needs of the 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, and ICAR (Institute for Conflict Analysis and Resolution) as well as social work, business, non-profit organizations, and education. The library is also a depository of European Union Documents.

SCHOOL OF LAW LIBRARY

The School of Law Library (which is administered separately from the University Libraries) combines a growing collection with a high level of information technology support to ensure that students and faculty have optimal access to all available resources for legal scholarly study and research.

The School of Law Library's collections consist of more than 5,600 law reviews and law-related journals and

serial titles, and over 250,000 volumes as well as microforms and electronic resources. The School of Law Library's collections are especially strong in law and economics, business, banking, economic history and theory, international law, and patent law, among other specialized areas.

PRINCE WILLIAM CAMPUS (MERCER) LIBRARY

The Prince William Campus (Mercer) Library supports the programs offered at the Prince William Campus, including bioscience and biotechnology; computer science; education; nursing; health, fitness, and recreation services; and administration of justice. The library also offers information services to the rapidly expanding corporate and technological presence in the area (including the American Type Culture Collection, the university's partner at the Prince William Campus).

TABLE 10.3 Overview of Statistics for the University Libraries and School of Law Library, Fiscal Years 2006 through 2008

	2005-06	2006-07	2007-08
Resources			
Volumes (Monographs and Bound Periodical Volumes)	1,154,980	1,206,462	1,249,562
Microforms	2,989,695	3,038,822	3,075,953
Print Periodical Titles Subscriptions	11,477	11,152	10,750
Electronic Databases	540	557	595
Electronic Books	52,639	78,613	82,530
Electronic Journals ¹	22,981	26,482	36,161
Media Collection	33,546	36,008	39,942
Print Government Documents ¹	340,599	341,031	341,174
Maps	213,654	213,925	214,718
Archival Collections	271	278	283
Services			
Digital Access to Collections, Resources & Services ²	~105M	~131M	~156M
Circulation (including renewals)	268,336	272,114	301,014
Print/Media Reserves: <i>Courses</i>	1,060	903	948
Print/Media Reserves: <i>Items</i>	4,048	7,651	13,167
Electronic Reserves: <i>Courses</i>	532	665	829
Electronic Reserves: <i>Items</i>	6,189	7,014	5,939
Inter-campus Delivery	2,778	3,161	2,477
WRLC Consortium Loan Service: <i>Borrowed</i>	16,149	16,690	13,518
WRLC Consortium Loan Service: <i>Loaned</i>	25,484	25,262	25,476
Interlibrary Loan: <i>Borrowed</i>	9,788	7,805	8,341
Interlibrary Loan: <i>Loaned</i>	14,055	14,181	13,118
Reference	81,534	79,930	37,772 ³
Research Consultations	2,554	2,705	2,760
Instruction: <i>Sessions</i>	795	696	383
Instruction: <i>Number of Students</i>	14,600	13,189	11,025
Staff			
Administrative and Professional Faculty ⁴	54	58	62
Classified Staff ⁴	75	77	78
Graduate Research Assistants	12	12	12
Student Assistants (FTE)	33	32	29

¹ Does not include School of Law Library holdings.² Estimated. Includes on-campus and remote "hits". Does not include School of Law Library figures.³ Reflects closing of Periodicals/Microforms Desk in Fenwick Library which represented 15,000 yearly transactions. Additionally, this lower figure represents a redefinition of library on-site Reference Desk assistance, most often of substantive consultation and instruction, for students and faculty.⁴ Includes Virtual Library of Virginia staffing.