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umbc computer center

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## UMBC'S COMPUTER CENTER: FACTS IN BRIEF

### I. PURPOSE

Welcome to UMBC's Computer Center, located on the third floor of the Social Sciences Building.

The Computer Center provides centralized, high-speed computing services for all academic computing needs, and is a major resource of the University's Baltimore County campus.

With provision for both individual research and classroom instructional accounts, the Center is a focal point for activities not only in the fields of Computer Science, Mathematics and Information Systems Management, but also in such diverse disciplines as Sociology, Engineering, Geography and Visual Arts, among many others. As the Computer Center endeavors to meet the challenge of constantly growing demand for resources, each semester brings a significant expansion in numbers of students served and software and services offered.

### II. MAINFRAME HARDWARE RESOURCES

The primary computer in use at UMBC is a Control Data Cyber model 170/720 with dual CPU's and a NOS 2 operating system. The Cyber provides 196K words of main memory (60-bit words), with 2 megabyte words of extended memory. There are 90 ASCII terminal ports at present, as well as three synchronous ports. The system includes two 885-12 disk drives containing 2.7 gigabytes of storage capacity, as well as two 679-5 tape drives capable of processing 160K or 625K characters per second.

Access to the Cyber system is gained through UMBC's Gandalf data switch, which routes communications to and from the campus' administrative computers as well. The Gandalf configuration also permits routing to the University of Maryland's other campuses,



thus permitting account holders entry to extensive computer resources at other sites. College Park's Univac 1100/82 computer is used for both research and instruction at UMBC, and its three IBM 4341 systems may be made available for specialized research.

Card readers and line printers are maintained for both the Cyber and Univac computers, and special graphics printers may be used by faculty and students in designated courses. CRT and terminal typewriter resources are described under FACILITIES.

### III. SOFTWARE RESOURCES

Under the NOS operating system, the Cyber supports the programming languages BASIC, Pascal, FORTRAN 4, FORTRAN 5, COBOL, SYMPL, and the assembly language COMPASS, as well as editors XEDIT, TEDIT and FSE. Statistical packages include SPSS (V.8), SPSS (V.9), BMDP, MINI-TAB, IGRASP, LISREL, TSP and SHAZAM. Library mathematical routines available are IMSL4, IMSL5, FFTLIB, TEAPACK and UWLIB. Other specialized packages include CD2000, SYMAP, ASPEX and RUNOFF.

Among the many additional applications available through the Univac processor are DMS 1100, APL, SNOBOL, LISP, PLOT-10, and DPS. A complete listing of current software may be obtained through the Program Library at College Park's Computer Science Center.

### IV. DIAL-UP FACILITIES

Forty general-use telephone lines are mounted on UMBC's Gandalf data switch for use by Cyber and Univac account holders from off-campus sites. The telephone number for these lines is 744-8000. Additionally, four lines are reserved for faculty use through a private number made available only to faculty. It is also possible to reach UMBC locally from the Washington area by accessing the data switch at the University of Maryland's College Park campus.

To communicate with UMBC's Gandalf and thus to use campus computer facilities from off-campus, the caller will need a computer terminal with appropriate telephone modem. Because home computer hardware can vary considerably, the caller should be thoroughly familiar with his instruction manual and with the various switches on his terminal before attempting a connection. The following general information is offered, however:

The duplex switch should be set at FULL.



Parity is seven bit, even, one stop bit.

Baud rate may be 300 or 1200.

Transmission mode is asynchronous.

## V. DEMAND AND BATCH FACILITIES

The Computer Center offers a variety of ways to access its computer resources. On-site facilities include provision for both demand mode and batch work, while dial-up lines allow the use of privately-owned terminals from remote sites.

There are currently 16 CRT terminals available for general use in room 313 of the Center, and room 312 now holds another 16 CRT's. Room 301 contains 17 Decwriter terminal typewriters, also for the general use of those with active accounts. In the third-floor hallway are several self-serve keypunch machines for the convenience of those using the Cyber and Univac card readers. The RJE desk, adjacent to the third-floor hallway, offers input of batch jobs and provides printouts routed from terminals to the systems' line printers.

Faculty members may work with data on magnetic tape by contacting User Services; students, however, have no access to tape resources through their instructional accounts.

A small terminal room for faculty only is to become available during the fall semester and will be accessible through room 301, upon presentation of appropriate identification. This room will contain two CRT's and a high-speed Decwriter.

Another new resource now available is the Engineering-Graphics Laboratory, located one floor down in room SS207. Slated for future expansion, this room now contains four CDC Viking graphics terminals and two printers. At present, use of these facilities is limited to faculty and to students enrolled in prescribed engineering courses.

## VI. MICROCOMPUTER FACILITIES

Rooms 305A and B constitute a double-sized micro lab containing 16 Apple IIe microcomputers and related equipment. The Computer Center is in the process of upgrading its microcomputing capability, and will be adding printers, graphics tablets, disk drives and some color monitors, as well as another 8 microcomputers.



Software resources include Apple Pascal, LOGO, VISICALC and PILOT. These products, in addition to others now being acquired, are used in conjunction with courses in areas as diverse as Accounting, Psychology, Education and Visual Arts.

Some classes meet regularly in this facility, and faculty members may reserve one section of the lab for occasional demonstrations. Students may use these facilities only when student time is scheduled and a faculty member or student consultant is present, and only students currently enrolled in a micro-oriented UMBC course are eligible.

#### VII. CENTER HOURS OF OPERATION

Normally, spring and fall semester hours of operation are as follows:

<u>DAY</u>	<u>TERMINALS AVAILABLE</u>	<u>RJE SERVICES</u>	<u>CONSULTANT SERVICES</u>
Mon-Thurs	7AM - MIDNIGHT	7AM - MIDNIGHT	7AM - 10PM
Friday	7AM - MIDNIGHT	7AM - MIDNIGHT	7AM - 6PM
Saturday	9AM - 5PM	9AM - 5PM	9AM - 5PM
Sunday	12 Noon - 9PM	12 Noon - 9PM	12 Noon - 9PM

Please note, however, that this schedule is subject to change. During break periods and summer sessions, hours are somewhat shorter; conversely, during peak times, some terminals may be made available on a twenty-four-hour basis.

Hours for micro lab and graphics lab operations are scheduled separately and do not conform to the above list. All schedules are posted prominently, however, and due notice is given before any changes take effect.

Users of the Cyber and Univac computers who have access to privately-owned terminals with modem connections are not limited to Center hours for use of these systems. If neither maintenance (scheduled or otherwise), nor dumps are taking place, users may access these systems at any time from off-campus locations.



## VIII. GETTING AN ACCOUNT

There are two major types of academic accounts in use at the Computer Center: instructional and research. Instructional accounts are used by students to complete their classroom assignments, while research accounts are held by faculty and staff, as a means of facilitating individual work. Application forms for both Cyber and Univac accounts may be obtained in room 213 of the Social Services Building or by calling the Computer Center office at 455-2201. Cyber account requests will be processed at UMBC, whereas Univac requests will be passed on to College Park for processing. All Univac accounts are managed at College Park and are subject to that facility's limits and regulations. Student instructional accounts will be deleted at the end of the applicable semester or term.

Although the Cyber computer maintains records of use and activity in each account, no charge is made for unfunded faculty research or instructional Cyber use. Research funded by outside grants or stipends will be billed, however. A fee schedule for users external to the University is also available, and may be obtained by calling User Services at 455-2583.

Each computer account name or number is accompanied by an assigned PASSWORD for access to the system. Users are cautioned that the security of their accounts depends on the maintenance of privacy regarding their passwords. Each system provides simple procedures by which the password may be changed by the user, and users are urged to change their passwords on a regular basis.

## IX. GETTING HELP

Simple computer questions may be directed to the First Aid desk located in room 301 on the third floor of the Social Sciences Building. All UMBC computer users are eligible for this service.

The primary intention of the station is to give immediate help to users whose jobs were not completed successfully. Student Consultants will interpret error messages and provide debugging hints. However, the logical construction and writing of programs, debugging, etc. remains the responsibility of the user. General questions about the computer and projects should be directed to the student's instructor or teaching assistant. Help cannot be provided via telephone.

Specialized help on SPSS problems is available on a part-time basis during both day and evening hours. Call User Services at 455-2583 for a current schedule of hours, or check the schedule posted in SS301.



## X. DOCUMENTATION

The Computer Center maintains a number of brief handouts on systems and applications "how-to", including basic information on signing on and using terminals, editor programs, subsystems, library routines and the like. Some of these are available to students at the First Aid desk in room SS 301. More detailed information on certain applications such as SPSS, editors and IGRASP will be generated, if available, for faculty members upon request. Contact User Services for assistance.

Users may consult major Cyber and Univac reference manuals kept by student consultants at the First Aid desk in SS301. Frequently used manuals include:

BASIC VERSION 3 REFERENCE MANUAL  
COBOL VERSION 5 USER'S GUIDE  
FORTRAN VERSION 5 REFERENCE MANUAL  
PASCAL REFERENCE MANUAL  
XEDIT VERSION 3 REFERENCE MANUAL  
COMPASS VERSION 3 REFERENCE MANUAL  
IGRASP MANUAL  
NOS VERSION 2 VOLUME 3 LEVEL 596  
CYBER LOADER VERSION 1 REFERENCE MANUAL  
UNIVAC 1100 EXECUTIVE SYSTEM, VOLUME 1  
UNIVAC FORTRAN V PROGRAMMER REFERENCE  
UNIVAC AMERICAN NATIONAL STANDARD COBOL (ASCII)  
PROGRAMMER REFERENCE  
UNIVAC DATA MANAGEMENT SYSTEM (DMS 1100)  
DATA MANIPULATION LANGUAGE AND SCHEMA DEFINITION

These volumes constitute part of the University's Technical Library, and may not be removed from the desk.

Much documentation is also available to users on-line on both the Cyber and Univac systems. Extensive HELP files may be accessed and read by all users, though students may not retrieve this material in hard copy form. Acquisition of the Cyber's Context software, planned for this fall, will permit on-line availability of detailed CDC system manuals.

UMBC's Bookstore stocks various publications and manuals which may be useful to more advanced users. Cyber documentation now in stock includes:

XEDIT Reference Manual  
COMPASS Reference Manual  
COBOL 5 Reference Manual  
FORTRAN 5 Reference Manual  
NOS 2 Volume 1 Guide to Interactive Usage  
NOS 2 Volume 2 Guide to System Usage  
NOS 2 Volume 3 System Commands  
Full Screen Editor



Those in need of advanced Univac documentation in bound form should contact either the Program Library (454-4261) or the User Services office of College Park's Computer Science Center (454-6030). Another source of information regarding new developments or changes is the NEWS program available on each mainframe system. Similarly, the Computer Center's Newsletter, published monthly except during the summer, frequently reports on software enhancements, schedule changes and new features.

Additionally, the Computer Center staff offers short informal courses scheduled irregularly several times a year. Among subjects frequently covered are Using the Xedit Program, Using the Fortran Subsystem, and How to Use the Full Screen Editor. These courses are announced in the Newsletter and publicized through bulletin board postings and other means. All are welcome to attend.

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