Maryland Community College Space Utilization Report
Volume I

Prepared By:

Workgroup on Space Utilization at
Maryland Community Colleges

April 2008

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Executive Summary

To implement the recommendations of the *2004 Maryland State Plan for Postsecondary Education* on Access and Affordability, the Maryland Higher Education Commission (MHEC) formed an Enrollment and Capacity Workgroup to study space guidelines and the capital planning process for higher education. The workgroup found that while Maryland's community college space standards are within the range for classrooms, they are below the standards of other states for weekly room hours and occupancy for laboratories. In addition, Maryland does not currently collect actual utilization data from the community colleges for classrooms and class laboratories. These findings led to a follow up workgroup to review and discuss space guidelines, utilization and scheduling at community colleges.

In summer 2007, MHEC formed the Workgroup on Space Utilization at Maryland Community Colleges. The charge of the group was to review Maryland community college space utilization for classroom and laboratory space to determine what improvements can be made to the space standards comparable to best practices.

The workgroup set out to examine several specific space topics. These included: 1) reviewing the work of the prior workgroup's finding and recommendations related to community college space planning and utilization; 2) reviewing space planning processes of other states to determine how Maryland's space planning process for community colleges compares and whether there are adjustments that can be made for improvement; and 3) examining community college space utilization.

The workgroup examined the components of space utilization as provided in national publications, practices in other states, and utilization and scheduling practices at a Maryland community college. Discussion of this topic included an examination of Maryland practices in class and class lab scheduling for both credit and noncredit courses. It also included an examination and discussion of alternative practices as used in other states and recommended by facilities planners to improve scheduling and room utilization.

To gain a better understanding of scheduling and utilization practices and actual space usage, the workgroup decided to survey the campuses. This was done through the development of two surveys, one on scheduling and space utilization practices and the other designed to collect data on room hours. This report summarizes the workgroup's activities and the first survey. A subsequent report will provide analysis and information on room use data.

The workgroup's findings regarding Maryland community college space guidelines are as follows:

1. Maryland has sound space planning guidelines.
2. Maryland's reporting of credit and contact hours through the S-6 report by community college may lack consistency.

3. Community colleges review space inventory and track utilization of space. These can be combined and developed to improve State facility planning policies.
4. The responsibilities for recording and reporting space, scheduling and utilization are performed by several different offices among the colleges.
5. Community colleges indicate that they are using many of the policies recommended for improving space utilization. These include centralizing control and scheduling of room space, establishing specific start and end times for classes, and scheduling academic activity in non-peak times.
6. While Maryland's space standards of community college classroom and class laboratory space can be compared with those of other states, a similar comparison of actual utilization data cannot be made because the State does not collect actual data from the colleges.
7. The use of Full-Time Day Equivalent (FTDE) enrollment for space planning may be outdated.

The workgroup made four recommendations for follow up to its review of space guidelines and utilization. These recommendations are:

1. The MHEC S-6 form should be reexamined to clarify instructions and definitions.
2. Colleges should continue to develop ways of tracking and reporting room utilization and scheduling for use in analyzing room use and improving efficiency.
3. Colleges should continue discussion of policies to increase utilization of campus facilities during nonpeak times, including scheduling mandatory credit courses in the afternoons and offering discounted tuition for classes offered during those times.
4. Space Guidelines should be further examined to determine whether the use of Full-Time Day Equivalent (FTDE) enrollment for space planning is outdated.

Background

In the *2004 Maryland State Plan for Postsecondary Education,* The Maryland Higher Education Commission (MHEC) included several recommendations to assess the implications of enrollment growth on capacity at Maryland's colleges and universities. Current Commission enrollment projections anticipate an increase of over 56,000 postsecondary education students at public colleges and universities by 2016. The purpose of this assessment was to determine how best to meet the needs of an increasing student population, including whether additional facilities are needed and, if so, where are they needed. In addition, the assessment included discussion of whether Maryland is maximizing utilization of current and existing higher education facilities and if there are ways other than building space or increasing space usage to accommodate more students.

The first step was to examine the capital facilities space guidelines for higher education and the capital improvement planning process. To conduct the review process, the Enrollment and Capacity Work Group was established. Under the direction of MHEC, the work group comprised members of the higher education community, including representatives of the University System of Maryland, Morgan State University, St. Mary's College of Maryland, the Maryland Independent Colleges and Universities Association, the Maryland Association of Community Colleges, the Department of Budget and Management and the Department of Legislative Services.

A broad review of the principal factors affecting space guidelines and the facilities inventory systems for both the four-year institutions and the community colleges was conducted. The workgroup made several findings and recommendations. The overall finding was that the State of Maryland utilizes a sound capital process to provide support for capital development to its colleges and universities. Maryland has an effective State capital budget process, in which higher education is included. Maryland recently received a grade of A- by Governing Magazine for Infrastructure in the *Grading the States 2005* issue, noting the strength of Maryland in Capital Planning, Project Monitoring, Internal Coordination and Intergovernmental Coordination. The statewide five-year capital plan includes projects from all state agencies, including higher education institutions, and is centrally prioritized at the State level. The plan is updated each year through the state capital budget process. Agencies must select and prioritize projects included in their capital budget requests and projects are prioritized based on the impending need for facilities expansion or new development in accordance with their agency Master Plan.

While it was acknowledged that Maryland's capital planning process is sound with respect to community colleges, the workgroup found that Maryland community colleges standards are within the range for classrooms but are below other states' guidelines for weekly room hours and occupancy for laboratories.

In addition, the workgroup recognized that while Maryland has standards that can be compared to other states, the State does not currently collect actual utilization data from the community college or public four-year college and university segments. The workgroup recommended that each institution should establish utilization goals and

identify efficiencies in use of space based on mission and develop and implement strategies to increase utilization to reflect the growing diversity in the format, times of instructional courses, programs and changes in student demand. They should also develop a method of reporting goals and utilization rates annually. Development of utilization goals, strategies and reporting should be made in consultation with the Maryland Higher Education Commission.

These findings and recommendations led to a follow up workgroup to review and discuss space guidelines, utilization and scheduling at community colleges.

Community College Utilization Workgroup

In summer 2007, MHEC formed a follow up workgroup to study space guidelines and utilization at community colleges. This group comprised facilities planners, registrars, and institutional research directors from several community colleges. The group also included the Director of Research for the Maryland Association of Community Colleges, representatives from the Department of Budget and Management and the Department of Legislative Services. The charge of the group is to review Maryland community college space utilization for classroom and laboratory space to determine what improvements can be made to the space standards comparable to best practices.

The workgroup set out to examine several specific space topics. These included: 1) reviewing the work of the prior workgroup's finding and recommendations related to community college space planning and utilization; 2) reviewing space planning processes of other states to determine how Maryland's space planning process for community colleges compares and whether there are adjustments that can be made for improvement; and 3) examining community college space utilization.

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Review of Florida Study

The review of Maryland's standards for Classroom space showed that the standards are below the Other States average standards as collected in "A Review of Community College and State University Facilities Space Planning Models" by the Florida Postsecondary Education Planning Commission in January 2000 in Weekly Room Hours and Standard Occupancy Rates. Maryland's standards for classroom laboratory space were below the other states averages in Weekly Room Hours, Standard Occupancy Rate, and Net Assignable Square Feet per Station (See Appendix A1 and A2).

Space Guidelines and Assessment of Space Needs

The group began its work by reviewing Maryland space guideline standards and comparing them to standards of other states. Maryland space guidelines provide standards for computation of space allowances using space categories listed in the national Higher Education General Information Survey (HEGIS) Space Classification System. Exhibit B provides the current space guidelines for community colleges.

The determination of space needs includes consideration of the following:

1. Type of institutions for which the need is to be considered;
2. Current and projected space inventories;
3. Current and projected enrollments;
4. Calculation of space factors; and
5. Calculation of space allowances.

The first factor to be considered in calculating space needs is an institution's space inventory. Space inventories are expressed in Net Assignable Square Feet (NASF). The facilities inventory reports provide the current inventory of facilities at a campus and include:

1. Type of facility by one of eight room use categories,
2. Size of facility in Gross Square Feet (GSF) and Net Assignable Square Feet (NASF);
3. Year constructed;
4. Year renovated;
5. Condition of facility;
6. Replacement value; and
7. Renovation costs.

Another factor in calculating space needs is enrollment. Enrollment is measured in three forms, Full-Time Equivalent Students (FTES), Full-Time Day Equivalent Students (FTDES), and Full-Time Night Equivalent Students (FTNES). Full-Time Day Equivalent Students (FTDES) are based on credit hours generated by students who attend classes on campus between 8:00 am and 5:00 pm. All student-based space other than classroom and laboratory space needs is calculated based on levels of FTDE enrollment.

Weekly Student Contact Hours (WSCH) is the primary enrollment factor in the classroom and laboratory space allowances. A Weekly Student Contact Hour (WSCH) is defined as one student in one classroom or class lab for one instructional "hour" (typically 50 minutes plus class change time) per week. Space allowances for classroom and teaching laboratories are based on WSCH generated by FTDES, or enrollments of students attending classes between 8:00 am and 5:00 pm and are generated through FTDE for credit hours taught for a particular space category, i.e. classroom, teaching laboratory. To assess future space needs, the community colleges use ten-year enrollment projections, as published in MHEC's annual Enrollment Projections Report.

The next component considered is the space factor. The formula for calculating the space factor for classrooms and laboratories includes three components: Station Size, Utilization Rate, and Occupancy Rate.

The space factor formula is as follows:

$$\text{Space Factor} = \frac{\text{NASF-SS}}{\text{Utilization Rate X Occupancy Rate}}$$

Finally, the consideration of space allowances for different types of space are taken into account. For classroom and laboratory inventories, the Space Factor multiplied by Weekly Student Contact Hours (WSCH) provides the Space Allowance. The Space Allowance is then compared with the actual inventory to determine whether a surplus (actual inventory is greater than allowance) or a deficit (actual inventory is less than allowance) exists.

Review of Other States

The group reviewed standards of other states. It examined three states, California, Florida and North Carolina. These states were chosen because they have large, nationally recognized community college systems and have performed a great deal of analysis regarding community college space issues.

California's process for analyzing space needs includes similar components as those used by Maryland. The first component is enrollment. The California Community College System Office conducts an annual systemwide space inventory that is submitted annually by the districts to the system office and prepares enrollment projections based on a linear regression model. Projected enrollment is then considered against current assignable footage capacities to determine future space needs. This is calculated by using the School Facilities Construction Regulations (SCFR), which provide the level of assignable square feet for each of six types of space as categorized by the SCFR. Projected enrollment is multiplied by the SCFR factors to provide the total assignable square feet by type of space.

Florida also uses a similar model. Coordination for Florida community colleges falls under the Division of Community colleges within the Department of Education.

Components in Florida's space planning process include the educational plant survey. The Division of Community Colleges collects data from an educational plant survey conducted by each community college on a five-year cycle. Space needs are then determined through the projection of enrollment based on a Capital Outlay Full-Time Equivalent Student (COFTE) projection. This is a measure of enrollment for each college discounted by students who are not taking courses on campus. COFTE projections are combined with utilization factors including weekly room hours and occupancy rates, and space allowances as determined by student station size in square feet to project needed space by type of space. These calculations are used to determine the number of classroom and teaching laboratory space needed to accommodate the projected COFTE enrollment.

North Carolina has a State Board of Community Colleges. Both the North Carolina Community College System and the Higher Education Facilities Commission work on space planning and capacity issues for community colleges. North Carolina's model takes into account the total amount of available instructional space by calculating the total amount of square feet that is available per FTE student. North Carolina takes utilization into account through the Capacity Enrollment (C/E) Ratio. The C/E Ratio is the total amount of instructional and library space divided by the total fall term student clock hours. The level of needed space is then determined by using a space factor of assignable square feet for the type of space divided by student clock hours. North Carolina looks at utilization through average weekly use of student stations and number of hours a course meets and the number of students enrolled in the course. It then projects the need for space based on FTE enrollment projections and utilization of space through the space planning components.

The components of Maryland's space guidelines are similar to each of the three states. All states use enrollment projections to determine future space needs. These enrollments are applied against a measure of inventory for each type of space. Future needs are determined through space allowance formulas that use space factors determined by square feet per station and student contact or clock hours.

The committee reviewed space utilization information from California, Florida and North Carolina. This information is provided in Appendix C. Maryland's Space Factor Standard for classroom space of 1.11 falls between California's standard of 0.43 and Florida's standard of 1.13. Maryland's space factor for class laboratory space of 5.83 is higher than the standards for all three states. As provided above, the space factor is a function of the size of student stations in net assignable square feet divided by product of the utilization and occupancy rates. A lower the space factor, indicates greater utilization of space. California and North Carolina report lower station sizes 15 and 18 NASF per station than both Maryland, reporting 20 NASF per station, and Florida, at 27 NASF per station. Maryland's standard for class laboratory of 63 NASF per station is higher than the standards for California and Florida, but lower than North Carolina. A lower station size indicates that more students can be accommodated by the space.

Maryland is below all three states in utilization rates for both classroom and class laboratories. Maryland reports utilization standards of 27 and 18 hours per week for classroom and class lab spaces, respectively. California's standards are 48 and 27.5 hours per week. Florida's standards for the same spaces are 40 and 30 hours per week. North Carolina's standards are 35 and 20 hours per week. Finally, Maryland reports a higher occupancy rate for classroom space of all three states, 66.7 percent. However, Maryland has the lowest occupancy rate for class laboratory space.

Suggestions from Studies Performed in Other States

California and Florida have both conducted studies of their facilities planning processes in recent years. The space guidelines in both states, as in many states around the country, were developed several years ago. Both states determined that a review of the guidelines was necessary to determine if they still apply to facilities that have had significant changes in utilization, technology, and student need. The review of these states also included examining recommendations for improvements to the space guidelines based on these analyses.

California

The California Postsecondary Education Commission reviewed the state's space guidelines for community colleges in 2004. The Commission expressed two concerns: their space standards were among the most stringent in the country, and, whether their standards designed years ago still applied to the current and evolving needs of higher education. The Commission came to the conclusion that having stringent guidelines and utilization standards is no longer appropriate or realistic for determining the need for academic space in public colleges. The Commission noted that space and utilization guidelines should be flexible to provide the most efficient and effective approach for meeting evolving needs of academic programs. It also concluded that space use at colleges should be monitored on a regular basis and that there should be regular reports from each higher education segment on space use. It recommended that a space/use standards advisory committee should be established under the Commission with the responsibility for reviewing space standards and utilization information and recommending changes and updates to the process when needed.

Florida

In 2006, the Office of Program Policy Analysis and Government Accountability (OPPAGA) of the Florida Legislature looked at higher education facility construction costs and utilization of classroom space. The Florida legislature recognized the importance of improving efficiencies in postsecondary education construction programs. Part of this review involved a discussion of how well colleges use existing facility space.

In the review, the OPPAGA made several interesting findings regarding utilization patterns at Florida community colleges. Two of these findings were:

- Community college classrooms receive the highest use between Mondays and Thursdays and have significant declines on Fridays.
- Community college classroom utilization peaks between 8 AM and 1 PM and lowest utilization occurs between 1 PM and 5 PM.

The office reviewed practices at colleges with both high and low classroom utilization to determine what successful colleges were doing to improve utilization levels. The office found that colleges that set specific classroom utilization goals have adopted strategies to increase utilization rates in order to achieve those goals. Another finding is that, in order to be successful, any program measuring utilization must be supported by complete and accurate data that is provided on a regular basis. This is essential to allow space managers, college administrators and policy makers to make informed decisions about facility needs and usage.

The report also made several recommendations to improve utilization through scheduling techniques. One recommendation was that colleges should survey students to determine preferences and limitations regarding class scheduling. If the results show demand has changed, or is different than the assumptions made by the college, the college should implement new scheduling policies that are in line with student needs and create efficiencies.

Another recommendation is to develop a more market-based approach to scheduling in order to improve utilization. One way to adjust room usage is to schedule mandatory courses at non-peak hours and schedule elective courses at peak times. Another way to improve demand during nonpeak times is to provide financial incentives to attend classes during these hours, such as discounted tuition rates for classes offered in the afternoons.

Implementation of either of these policies would require colleges to perform detailed analyses of student demand for programs in their service areas. Consideration of discounting tuition at different times of the day would also require analysis of what level of tuition would be foregone if students shift from peak classes to lower-priced nonpeak classes. The college would also have to determine whether it has the administrative capacity to implement another tuition level as well as what level of confusion another rate would cause for the students.

Another recommendation is to improve efficiency in departmentally scheduled space. Often, colleges have little control over space that is controlled by academic departments. One way to improve utilization at departmentally scheduled space is to establish block times for scheduling. A block schedule requires departments to schedule instructional space for a period of time covering more than one class period. If the department cannot schedule classes within a time period covering three or more classes, it loses the entire block to centralized scheduling. This helps colleges improve efficiency by ensuring that the space is scheduled through portions of the day rather than by individual classes.

Discounted Tuition Levels for NonPeak Classes

The workgroup considered Florida's recommendation to charge discounted tuition for classes at nonpeak times. It was thought that Maryland law prohibited community colleges from charging lower tuition rates at different times of the day. MHEC discussed this issue with its Assistant Attorney General. From the Assistant Attorney General's review of statute and regulations, there does not appear to be language that would prohibit a community college's governing body from allowing a lower tuition rate for classes taken based on certain times of the day.

Classroom and Class Laboratory Space Use and Utilization

The workgroup looked at space use and utilization of classroom and class laboratory space from a national perspective. The national information was provided in two articles from "Facilities Manager" magazine, published by the APPA (formerly the Association of Physical Plant Administrators), an international association serving educational facilities professionals dedicated to maintaining, protecting, and promoting the quality of educational facilities. One article addressed Classroom Use and Utilization and the other article discussed Class Laboratory Space Use and Utilization.

Classroom Use and Utilization

The article describing Classroom Use and Utilization stated that the first step in improving use of classroom space is to measure and classify the space to gain a better understanding of its utilization.

Most classrooms are general purpose classrooms, basic classrooms that are owned and managed by the college and university. Scheduling of these rooms consists of a process of distributing instructional rooms for use in the upcoming term based upon their distribution and use in a prior term. This can be performed manually, but more and more institutions are now using computer algorithms and software programs that have been developed to assist in course scheduling.

The article recommended several steps to improve classroom utilization.

- Begin by collecting and reporting accurate and comprehensive data.
  - Maintain a campus facilities database.
  - Use information from the Registrar's course record.
    - Weekly Room Use Hours.
    - Average Percentage of Student Station Occupancy.
- Colleges should schedule standard course meeting times and must ensure that classes begin and end at specific times.
- The goal is to achieve optimization over accommodation.

One factor in assessing and improving utilization is the instructional class period. Many colleges have different class periods on Mondays, Wednesday and Fridays than they do on Tuesdays and Thursdays. Classes are often scheduled on an hourly basis, meeting in

50 minute increments, or in 90 minute time frames with 75 minutes of instruction and a 15 minute break. In order to improve utilization, colleges must standardize class meeting times and keep them uniform. They must also ensure that, once a uniform class schedule is developed, classes must start and end at their scheduled times.

There are two distinct measures used in analyzing classroom utilization, classroom use, and classroom utilization. Classroom use is the time in which the room is occupied. Generally, only scheduled assignment of classrooms is recorded at a campus. Classroom utilization is a measurement of the number of stations occupied compared to the total number of stations in each room. To account for periods of no classroom use, most colleges target a percentage of available classrooms in use as an indication of full use. By national standards, a target utilization rate of 66.7 percent of the seats in a room occupied over the duration of the instructional week is considered to be fully utilized.

Classroom Laboratory Space Use and Utilization

The second article from the APPA discussed classroom laboratory use and utilization. According to the U.S. Department of Education National Center for Educational Statistics, class laboratories are rooms used primarily for formally or regularly scheduled classes that require special purpose equipment or a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline.

There are three types of space associated with class laboratory space: class laboratories, special classrooms and class laboratory service space. A class laboratory is a room designed or furnished with specialized equipment to serve the needs of a particular discipline. The design of this space normally limits the use to specific academic disciplines and precludes its use to other disciplines, foreclosing open use. Since this space is generally not interchangeable with other disciplines, it has lower utilization.

A Special Classroom is a room or studio that is used for regularly or formally scheduled classes that require a unique or distinct space, but does not require specialized equipment to serve the needs of a particular discipline for group instruction. This space includes band rooms, choral and dance studios and rehearsal rooms and can have open use.

Classroom laboratory service space is space that directly serves one or more class laboratories or special classrooms as an extension of the activities of those rooms to provide supplies, services, preparation or storage.

Tuesdays and Thursdays are peak laboratory instructional days, with Tuesdays being the busiest day.

Several characteristics of classroom laboratory space complicate the efficient utilization of this type of space.

- Departmental Control. This space is usually departmentally controlled and the department generally holds onto the space and is often unwilling to allow scheduling of the space outside of its needs.

- Distributed Space. Class laboratory space is distributed space. Rather than being located in one centralized building, classroom laboratory space is usually dispersed across the campus, permitting excess space to often be hidden from view.
- Specialized Equipment. There is often specialized equipment located in these rooms designed to support activity for the specific discipline. Utilization of the lab space is hindered by two factors: the usefulness of the equipment for other purposes, and the size of the equipment within the room, limiting space for student stations. The age of the equipment being used in the lab can also affect utilization. Older equipment is usually larger than modern equipment, taking up more space and lowering utilization of the lab. Specialized furniture often supports lab equipment. The configuration of specialized furniture can take more space than stations in classrooms. Station size in laboratories is often two to three times larger than classroom station size.
- Service Rooms: If a class laboratory is being underutilized, it is likely that the service rooms supporting the laboratories are also being underutilized.

The article provided recommendations that colleges might take to improve laboratory use. One recommendation is to conduct a space use analysis on this type of space, and account for every lab on the campus, since this space is usually out of the control of central scheduling offices. This will allow the college to determine and analyze the level at which departmentally controlled or distributed lab space is being utilized.

Another recommendation is to analyze lab utilization by:

- Matching the facilities room inventory database of class laboratories with the registrar's record of regularly and formally scheduled class labs and identifying any rooms that have not been scheduled for use;
- Identifying any sparsely used laboratories for additional analysis; and
- Identifying and documenting the class laboratories that have little or no use, too little demand, too much capacity, outdated equipment or obsolete space that no one wants to use.

A third recommendation is to take appropriate action:

- Revise or consolidate the laboratory portion of courses;
- Improve the physical space and promote better use of the room;
- Reconfigure or renovate the space;
- Remove the space from departmental use and reassign it for another higher priority demand; and/or
- Match the room capacity to the section size used in the academic instruction program.

Other recommendations included: building new class laboratories; renovating existing laboratories by installing new benches, counters, cabinets and equipment; incorporating new instructional approaches, and using computer-simulation for hands-on experimentation.

Anne Arundel Community College Utilization and Course Scheduling

Next the workgroup discussed scheduling practices at a Maryland community college as a means to improve utilization. Judith Coughlin, Registrar for Anne Arundel Community College (AACC) presented the college's policies regarding space scheduling and facilities use. The policies for scheduling at AACC are consistent with those described in the APPA articles on classroom and class laboratory space. As one of the larger community colleges in the State, AACC has implemented effective methods and scheduling software to manage its course scheduling process.

The college's course scheduling goal is to maximize the use of college facilities while meeting State requirements for time in class. AACC prioritizes instructional activity and has implemented a policy where no department owns space, the college owns the space. The college places priority on credit classes over continuing education classes. The college also attempts to incorporate flexible scheduling as much as possible to maximize efficiency.

The college schedules classes with specific start and end times on specific days of the week. Monday, Wednesday and Friday classes use 50 minute time slots, and Tuesday, Thursday classes are scheduled in 75 minute periods with 15 minute breaks. The college offers 50 minute classes during the prime times of 8 am to 2 pm on Monday/Wednesday/Friday so that it can offer 6 course sections during the high-demand time frame rather than 4 sections in a two day format. Evening classes are offered two nights per week for 75 minutes per class followed in the same classroom by a three hour, one night per week class, allowing two courses per room per evening.

When preparing the class schedule, the college analyzes the full academic calendar for each semester. This includes analysis of the regularly assigned space for 15 week classes, specifically assigned space for certain programs, and continuing education courses to allow for maximum usage as well as flexible scheduling to run shorter term classes, e.g. 8 week sessions, back to back in the same space to gain extra enrollment efficiently.

The college sets its evening class schedule by running two classes per room. This allows flexibility to run 8 or 15 week classes per time block and flexibility to incorporate certain programs for students with specific schedule needs.

The college provides instruction through distance learning classes and incorporates these classes to relieve pressure on schedule space. Enrollment data for the college shows that a large percentage of students at AACC take both distance education simultaneously with traditional classes at the college. The college also offers instruction through hybrid courses, or classes that combine classroom instruction with online learning. These classes do require scheduling of space, since approximately 50% of the time is spent in class. The college tries to maximize scheduling by coordinating the in-class portion of courses to run consecutively rather than concurrently.

Anne Arundel uses scheduling software to manage its course schedule. The college uses a Datatel Colleague database and Resource 25 software for scheduling. These systems provide valuable information to prevent scheduling conflicts, but are expensive. One company quoted a cost of $35,000 to $75,000 for their room scheduling program, with a lease cost of $1,000 to $1,500 a month,

Anne Arundel Community College has concluded the following:

- Scheduling must be done at the school level, rather than at the departmental level to ensure classroom utilization is maximized;
- Academic programs can be modified to accommodate additional schedule times; and
- Discipline needs must be met through unique laboratory space, but they can share general purpose classroom space.

Effective scheduling must:

- Involve effective setup of scheduling packages;
- Utilize spaces for multi-purposes;
- Create calendars and schedules to most effectively use college facilities;
- Respond to student needs;
- Predict consequences of program changes;
- Balance efficient scheduling with the flexibility of meeting the needs of varied populations; and
- Be flexible to respond to workforce needs through contract courses.

Survey of Community College Scheduling and Utilization Policies

Through workgroup discussions, it became apparent that the colleges use different scheduling prioritization and utilization policies. It is also difficult to calculate actual utilization rates for each college because actual data is not reported by the colleges to MHEC. The workgroup felt it was necessary to survey the community colleges to gather this data. The workgroup developed a survey in multiple sections to gather data in each of these areas. After further discussion with Institutional Research Directors, two surveys were developed, one to collect responses to a series of questions on how the colleges currently collect, review and analyze facilities, scheduling and utilization data, and the other to collect actual utilization data.

Both surveys were sent to the community colleges for dissemination to offices responsible for the respective sections. After receiving the survey, the Maryland Community College Research Group (MCCRG), an affinity group of institutional research directors and staff, discussed the surveys with MHEC at one of their regular meetings. The group determined that they could complete the narrative survey, but expressed concern that the initial survey requesting utilization data needed refinement to account for individual characteristics of each college. A group of representatives from college institutional research, facilities planning, continuing education and registrar offices and MHEC staff was formed to discuss and design a more effective utilization survey.

First Survey – Maryland Community College Space Utilization Survey

The first survey asked questions in narrative form relating to schedule and utilization practices at the colleges. It was divided into four sections. The first section was addressed to Institutional Research offices and asked about the reporting of credit hour and contact hour enrollments as well as collection and reporting of utilization data. The second section was addressed to the Facilities Planning and Management Offices and asked questions regarding space inventory, coding of space and space guidelines.

The third and fourth sections asked questions related to timing and scheduling of credit and continuing education courses. These questions asked what time blocks are scheduled for the majority of classes on days of the week, how the scheduling is administered, what programs are used to schedule classes, and what actions colleges have taken to improve utilization. A copy of the Survey is provided in Exhibit D. Exhibit E provides a summary of the responses from each of the colleges to the survey. A summary of the responses to the narrative survey is provided below.

Second Survey – Maryland Community College Room Hours Survey

The second survey is designed to collect utilization data for classrooms and class laboratories. This survey focuses on room hours available compared to room hours actually used in order to calculate space utilization rates on community college campuses. The survey instrument was recently finalized and distributed. Data is due by May 16 and it will be analyzed and reported in a subsequent report.

Institutional Research

<u>S-6 Reporting</u>

Annually, each college reports FTE enrollment on the MHEC S-6 Report. This report provides fall credit hour and eligible continuing education enrollment data and is used as the basis for analyzing current space sufficiency and needs in conjunction with the annual space inventory reports.

Colleges were asked whether the definitions in the S-6 report make it difficult to capture and report the total number of hours utilized in four areas: continuing education hours, distance education hours, noncredit course hours, and credit course hours. Ten colleges responded that it was difficult to report continuing education hours, while only 6 responded that it was not. Distance education hours fared better, with only 7 institutions responding difficulty reporting those hours, and 9 with no difficulty. The responses to credit and noncredit course hours were mixed. Eight institutions reported difficulty reporting credit hours and 8 others reported no difficulty. Nine institutions reported difficulty reporting noncredit hours with 7 reporting no difficulty.

The colleges expressed several concerns with the S-6 report that they say make it difficult to complete. The operational definitions are unclear, so it is difficult to know if the definition or intent is being addressed. The definition of off-campus sites is also unclear. It is difficult to correlate S-6 results to capture total number of hours utilized by all areas. Continuing education courses are often not counted, since they have irregular hours or meet after 5 pm. It is also not clear how to capture the average of August, September and October for FTDE and Weekly Student Contact Hours in eligible continuing education classes. It would be beneficial if they could report information for the fall period of July through October for continuing education. It was also expressed that it is difficult to capture distance education courses that have meeting or testing time on campus.

Additionally, 13 institutions reported that contract courses count in room utilization, and three reported that they do not.

Utilization Reporting and Review

Thirteen institutions reported that they review utilization on a periodic or regular basis. Three institutions had no response. This responsibility is performed by different offices at each college. These include Facilities Management, Admissions/Registration, Institutional Research, Administration, Scheduling Student Services, Academic Affairs offices as well as Departments and Academic Deans.

Of the thirteen, twelve institutions report that they track utilization rates. Five institutions use third party software and four institutions use in-house systems. One institution tracks rates manually and is in the process of implementing a software program. Two other institutions reported that they are in development of utilization tracking programs. Four institutions, Allegany, Chesapeake, Prince George's and Wor-Wic community colleges, report that they do not track utilization rates.

In reporting utilization rates, twelve institutions reported that they can report the rates. Of the twelve, three of the institutions can report the rates manually, and two of these institutions are developing automated methods to report the information.

Credit Hours and Contact Hours

Half of the colleges report using course contact hours as the basis for weekly student contact hours. Seven institutions use credit hours. One institution responded that it uses both, depending upon the course. Credit hours are used for credit courses, and contact hours are typically used for noncredit courses.

Several offices on different campuses are responsible for determining classification codes for rooms. They include Institutional Research, Facilities Management, Enrollment or Registration, Scheduling, IT, Marketing and Administrative Services.

Facilities Planning and Reporting

Most colleges report that their facilities planning offices are responsible for conducting academic space inventory. This is performed annually at most of the colleges and recorded on Excel spreadsheets. Three colleges, Anne Arundel, College of Southern Maryland and Montgomery College, report that they maintain inventory data on information system databases other than Excel. The Community College of Baltimore County reports that it is in the process of moving to a database system.

There is consistency as to how computer-equipped labs and other laboratory space is coded. Almost every college classifies this space under the HEGIS 210 Code.

Most colleges report a range of planning guidelines for station sizes for classroom and class laboratory space. These follow the space standards established in the space guidelines for community colleges. The range for standard classrooms is from 18 to 34 net assignable square feet (NASF) per station. For classrooms with computers, the station size range rises slightly to 18 to 40 NASF per station.

The same is true for class laboratory space. Colleges report a range of class laboratory station size of 20 to 50-115 NASF per station consistent with Maryland space guidelines of 50 NASF per station for natural and social science labs, and 115 NASF per station for technical and career labs. The range for class laboratories with computers is also consistent with these guidelines.

Scheduling of Credit and Noncredit/Continuing Education Courses

The colleges were asked to indicate the time periods in which the majority of classes are scheduled for both credit courses and noncredit courses. They were given the choices of 45 to 75 minutes, 75 to 90 minutes, or Other.

Credit Courses

Scheduling

Two colleges reported that the majority of their credit classes offered Monday through Friday are scheduled in 45 to 75 minute blocks. Four colleges reported that they schedule credit classes in 45 to 75 minute periods on Monday, Wednesday and Friday, and 75 to 90 minutes on Tuesday and Thursday, the days when most laboratory classes occur. Eight colleges report scheduling blocks of 75 to 90 minutes on Monday through Friday and two colleges report scheduling periods of other.

The colleges were also asked whether they schedule classes on Fridays, Saturdays and Sundays. Five colleges responded that they schedule credit classes based on a five-day week that includes Fridays. Of the remaining 11 colleges, only one college reported that it does not schedule Friday classes. Garrett College reported that it schedules special

classes, such as Adventure Sports and Natural Resources classes that require outdoor field work, on Fridays.

Most of the colleges reported scheduling credit classes on Saturdays, with only one college reporting that it does not. Five colleges reported scheduling credit classes on Sundays and four colleges reported a limited Sunday schedule. Two colleges reported being open on Saturday, but without scheduled classes, and five colleges reported not offering Sunday credit classes.

The colleges were asked how the time for classroom and class lab schedules for credit classes are controlled, centrally, departmentally, or a mix of both. For classroom space, nine colleges reported that classroom space for credit classes is centrally controlled and scheduled. Five colleges reported that the time is centrally controlled, but scheduled by departments. Only two colleges reported that classroom time is departmentally controlled and scheduled.

For class laboratory space, only six colleges have centrally controlled and scheduled space. The majority, or nine, of the colleges have centrally controlled but departmentally scheduled lab space. Two colleges have departmentally controlled and scheduled lab space, consistent with classroom space.

Most colleges report using an information database to schedule classes and assign rooms. Nine of those colleges also use 3rd party software to automate the process. These programs include Schedule and Resource 25, programs by AdAstra and others. Schedule 25 is a space scheduling system that generates classroom schedules. Resource 25 is an on-line, interactive system for class and event management. It is designed to assign, view, and change reservations for campus spaces. Class schedule data generated by Schedule 25 is directly loaded into Resource 25. Colleges using Resource or Schedule 25 include Anne Arundel, Baltimore City, Baltimore County, Carroll and Frederick community colleges. Garrett College reports using a program called Scheduler Plus and Allegany College reports using EMS Lite.

Howard and Prince George's community colleges report using AdAstra systems. AdAstra Information Systems offers a scheduling program that provides interactive scheduling for rooms, events, classes, equipment, service providers, catering, students, faculty and event attendees that can interface with existing databases. The College of Southern Maryland has reported that it is implementing AdAstra in 2009.

Of the colleges that are not currently using outside software scheduling software, Montgomery College reports that it currently runs scheduling on SCT Banner, but is looking at both Schedule 25 and AdAstra in order to further automate the process in the future. Allegany, Chesapeake, Harford, and Wor-Wic community colleges report scheduling classes and assigning rooms on an information database developed in-house or provided by an external vendor such as Datatel or Banner. Only Cecil Community Colleges reports scheduling rooms manually through their student information system.

Methods and Success in Improving Room Utilization

The colleges cited many actions they are taking to improve room utilization. Eleven colleges stated that continuously monitoring time class schedules has helped them improve utilization. The implementation of 3rd party software has also been cited as helping improve utilization. Several colleges reported that they are now scheduling classes during off-peak times, either in the early morning like Garrett and Wor-Wic, or in traditionally slow times in the afternoons, as reported by five of the colleges. The Colleges also report that they have worked to establish specific class start and end times, time slots or block times so that classes can be run more efficiently

The colleges that have made adjustments to their scheduling practices report that they have been mostly successful in improving utilization rates at off-peak times. Seven colleges state that they have been able to schedule a variety of classes in the afternoons. Those colleges have named general education and high-demand courses as those being the most successful in off-peak times. While there has been success in filling the later times, the success seems to be modest but improving.

The colleges agree on course-related hours that are not being reported. These include lab preparatory time, on-campus orientations, on-line course examination times, make-up exams, and other non-instructional activities occurring in classrooms.

Non Credit/Continuing Education Courses

Scheduling

The colleges predominantly report Other as the time block scheduled for continuing education courses. This is consistent with the nature of noncredit courses. Four colleges report that they schedule time blocks for continuing education courses during a portion of the week. The College of Southern Maryland, Frederick, and Harford, report time blocks of 75 to 90 minutes for continuing education courses during the week. Chesapeake College reports that their continuing education courses are scheduled between 45 and 75 minutes between Monday and Friday. Most colleges report that they offer noncredit courses on the weekends.

Eight of the colleges control and schedule the classrooms centrally, 5 control the classes centrally, but they are scheduled by departments, and two colleges have decentralized, or departmentally-based control and scheduling. One college reports departmentally controlled but centrally scheduled classrooms. Class laboratories are centrally controlled and scheduled by 8 of the colleges, are centrally controlled but scheduled by departments at five of the colleges, are controlled and scheduled by the departments at two colleges, and, as with classrooms, class laboratories are departmentally controlled but centrally scheduled at Howard Community College.

The colleges that reported databases and 3rd party software for their scheduling systems for credit classes also use the systems for scheduling noncredit hours or courses. Those

that do not have databases and systems, such as Cecil Community College, schedule noncredit courses manually.

Methods and Success in Improving Room Utilization

The colleges that have scheduling systems report that it is the use of the systems that have allowed them to improve room utilization. These systems provide the opportunity to monitor and review scheduling of noncredit space and fill lower utilized rooms. Frederick Community College reported that it has moved continuing education scheduling to a central office. Montgomery College reports that it has begun scheduling noncredit classes at the same start and end times as credit classes, providing more continuous use of rooms over the semester.

Success in improving utilization rates for noncredit courses is more mixed than for credit classes. Six colleges report moderate success in utilizing non-peak hours for noncredit courses. The colleges state that these classes are scheduled based more on demand than credit classes, and students cannot be a made to take noncredit classes when there is lower demand.

The colleges report prep time, computer-based instruction in open labs, on-line courses and other services such as meetings and workshops, practices and recitals as noncredit course times that are not being recorded or reported.

Findings

1. Maryland has sound space planning guidelines.

The workgroup determined that Maryland's space guidelines for community colleges are sound. This was the conclusion of the prior workgroup and enforced by the comparison to other states. While both groups concluded that the process for analyzing space needs is a sound one, there is some question as to whether the guidelines are comparable or below the standards of other states. A comparison to the standards in the Florida report indicated that Maryland's standards are below the averages of other states, but a comparison to the standards of California, Florida and North Carolina indicates that Maryland's standards appear to be reasonable.

2. Maryland's reporting of credit and contact hours through the S-6 report by community college may lack consistency.

Community colleges report that they have difficulty reporting hours on the MHEC S-6 Report for the four categories asked in the survey: continuing education, distance education, noncredit courses, and credit courses. Although this is not true for the majority of colleges in every category, the responses to the questions reveal that what is being reported on the S-6 reports may lack consistency.

The colleges also reported that some colleges report credit hours while others report contact hours for Weekly Student Contact Hours to be used in space planning. This can also lead to inconsistency in the data provided among the colleges.

3. Community colleges review space inventory and track utilization of space. These can be combined and developed to improve State facility planning policies.

Maryland community colleges conduct regular reviews of space inventories. This is performed by all colleges consistent with space inventory reporting provided annually to the Maryland Higher Education Commission. Additionally, most colleges responded that they track utilization rates of academic space and have systems, either manual or automated, where they can access classroom and class lab scheduling information. As APPA reported, continuous review and communication is necessary for effective improvement of space utilization. Colleges must monitor scheduling and utilization data and communicate with administrators, faculty and other staff in order to improve scheduling efficiencies. Further, this information can be provided to policy makers in order to inform the capital budget process by providing an assessment of how current facilities are being utilized as the need for new facilities is being considered. This information can be developed to provide utilization information for space on the campuses. With the right development, the current system of space analysis can incorporate space utilization when assessing college capital needs.

4. The responsibilities for recording and reporting space, scheduling and utilization are performed by several different offices among the colleges.

The responses to questions asking what offices are responsible for conducting space inventories, tracking utilization, and monitoring room schedules revealed that the responsibility is spread out across each campus to multiple offices. Further, each function is performed by different offices from one college to another. Most colleges indicated that they are capable of tracking and reporting room utilization, although they may not currently be formally reporting utilization on a regular basis. To collect utilization data, a survey or report will have to be designed with clear instructions and definitions so that staff from several different disciplines will be able to understand what is being requested and report data in a consistent manner.

5. Community colleges indicate that they are using many of the policies recommended for improving space utilization. These include centralizing control and scheduling of room space, establishing specific start and end times for classes, and scheduling academic activity in non-peak times.

The space utilization survey provides information that Maryland community colleges are following or implementing policies that are consistent with the recommendations from the selected states and APPA for improving space utilization.

Scheduling practices follow policies recommended for maximizing space use. The majority of the colleges reported that their credit classes offered Monday through Friday

are scheduled in specific time intervals, either in 45 to 75 minute or 75 to 90 minute periods. As discussed in the article from the APPA, setting specific start and end times for classes and following those times increases efficiency of room utilization. Only Cecil and Hagerstown community colleges reported scheduling periods of other for credit courses outside the specific time periods provided.

Most colleges schedule classes on Fridays, either as part of a five-day week or separately. A majority of the colleges report that classroom space for credit classes is centrally controlled and scheduled. Scheduling of class laboratory space is much more decentralized, with only six colleges centrally controlling and scheduling lab space. However, while nine of the colleges schedule lab space through departments, the space is centrally controlled. Having central control of space is important, since the offices responsible for scheduling and utilization of the space can have information readily available to monitor and review utilization. This information can be shared and feedback can be obtained from other personnel in the college, including department personnel and other staff responsible for scheduling the space. The colleges also monitor utilization, another important step in improving utilization. Most of the colleges report that they review utilization either on an annual or semester basis.

The majority of community colleges responded that they have had some success in scheduling courses in non-peak times. Some colleges are scheduling more classes in the afternoons because demand for classes in the mornings has made afternoon scheduling necessary.

The colleges also noted that other policies, such as regular review of scheduling and utilization, scheduling at specific start and end times and block scheduling have also contributed to more efficient use of academic space. Montgomery College is now synchronizing noncredit courses with credit class schedule time in order increase the efficiency of its use of classrooms. Several colleges also noted that they are providing distance learning and hybrid courses in order to lower the demand for room space. Colleges are creating efficiencies with hybrid courses by synchronizing in-class portions of the courses to use specific rooms at different times of the semester.

While the utilization workgroup was meeting and considering recommendations from other states, it took note of the recommendations from Florida pertaining to scheduling courses and providing discounts for classes scheduled in nonpeak times. MHEC followed up discussion of tuition discounting by requesting its Assistant Attorney General to determine whether there is anything precluding community college from offering tuition discounts for classes during non-peak hours of the day. The Assistant Attorney General responded that there did not appear to be anything in statutory or regulatory law that would not allow a community college's governing body from allowing a lower tuition rate for classes taken based on times of the day. As was illustrated by the activities in other states, this could be an area of discussion among community colleges and the Maryland Association of Community College to explore whether a policy could be developed for the purpose of increasing utilization on the college campuses.

6. **While Maryland's space standards of community college classroom and class laboratory space can be compared with those of other states, a similar comparison of actual utilization data cannot be made because the State does not collect actual data from the colleges.**

Maryland's space standards are comparable to those of other states, but as noted by both workgroups, some of the standards fall below national averages. When these standards were compared to actual data from California, Florida and North Carolina, they appeared to be reasonable. Maryland does not currently collect actual utilization information on room hours and occupancy. Collection and analysis of this data would be helpful to determine how Maryland colleges compare with actual space utilization data from other states.

7. **The use of Full-Time Day Equivalent (FTDE) enrollment for space planning may be outdated.**

Maryland's space planning and guidelines use full-time day equivalent student (FTDE) enrollment as the basis for projecting facility needs at community colleges and public four-year colleges and universities. Other states use enrollments that include all full-time equivalent student enrollments attending classes on-campus as the basis for projecting facilities needs. As California has reviewed its space utilization and planning standards to determine whether they should be updated to address current and evolving higher education trends, Maryland should review the use of FTDE in the space planning process to determine whether a more comprehensive measurement of enrollment should be incorporated into the space guidelines. This should be reviewed by both the community college and public four-year segments of higher education.

Recommendations

1. **MHEC should begin collecting utilization information for room hours and occupancy.**

As part of the work of the utilization workgroup, there was discussion of collecting actual utilization data for Classroom and Class Laboratory space. A data survey was designed and distributed to the colleges for completion this spring. Staff will examine the data to see what types of information it provides regarding utilization and patterns during times of the day and for different days of the week. This wil result in a report in the fall. Staff will continue to work with the colleges to collect utilization data for the purpose of assessing space utilization.

2. **The MHEC S-6 form should be reexamined to clarify instructions and definitions.**

MHEC should work with institutional research, facilities planning and other appropriate personnel from both the community colleges and the public four-year institutions to

examine the MHEC S-6 form for clarity. The colleges have indicated that the information requested regarding credit and contact hours are unclear and can be open to interpretation by individuals completing the form. A group should be convened to review and modify the S-6 form instructions so that the information collected will be consistent across all colleges and universities.

3. **Colleges should continue to develop ways of tracking and reporting room utilization and scheduling for use in analyzing room use and improving efficiency.**

The value of tracking and monitoring room scheduling and utilization has been stated. By reviewing room use on a regular basis, college administrators, faculty and staff can become better informed of how efficiently the college is using its existing space. This also allows staff from across disciplines to begin to work together to coordinate schedules across the entire campus, as opposed to their individual departments. This can allow them to schedule classes in appropriately sized rooms and coordinate class times for increased efficiency. Most community colleges have indicated that they are tracking utilization to some extent either manually, through in-house programs or by third party software programs. While automating the scheduling process may be cost-prohibitive for some colleges, colleges should develop and implement a method for analyzing room schedules. By engaging and informing campus personnel involved in scheduling, improvements can be made.

4. **Colleges should continue discussion of policies to increase utilization of campus facilities during nonpeak times, including scheduling mandatory credit courses in the afternoons and offering discounted tuition for classes offered during those times.**

Colleges have stated that they have had some success scheduling mandatory credit classes before 8 AM and between 3 and 5 pm. Those colleges that have had success should discuss how they have been able to implement scheduling policies to increase nonpeak utilization with other community colleges through affinity groups and other forums. MHEC, MACC and the colleges should also begin discussing whether the colleges would be able and willing to explore tuition discounting for classes offered during nonpeak times. This would require a shift in current policy and analysis to determine whether each college could provide tuition discounts in an economically sound manner. Discussion would have to include representatives of the administrations of each college as well as MACC and MHEC staff. Additional analysis might also have to be performed by the Attorney General's Office to confirm the flexibility of community college boards to consider tuition discounts on the basis of time of day.

5. **Space Guidelines should be further examined to determine whether the use of Full-Time Day Equivalent (FTDE) enrollment for space planning is outdated.**

Maryland's space planning and guidelines use full-time day equivalent student (FTDE) enrollment as the basis for projecting facility needs at community colleges and public

four-year colleges and universities. Other states use enrollments that include all full-time equivalent student enrollments attending classes on-campus as the basis for projecting facilities needs. As California has reviewed its space utilization and planning standards to determine whether they should be updated to address current and evolving higher education trends, Maryland should review the use of FTDE in the space planning process to determine whether a more comprehensive measurement of enrollment should be incorporated into the space guidelines. This should be reviewed by both the community college and public four-year segments of higher education, the Maryland Higher Education Commission and the Department of Budget and Management.

Appendix

Exhibit A. A Review of Community College Facilities Space Planning Models, Florida Postsecondary Education Planning Commission - January 2000

Table 1

Comparison of Unadjusted Standards/Guidelines[1]
Classroom (Average)

State System	Weekly Room Hrs	STD Occupancy Rate	NASF/Station
Other States	29.8	65.9	16.0
Minimum	23.0	60.0	10.0
Maximum	60.0	80.0	27.0
Maryland	23.5	63.4	19.0
Difference	- 6.3	- 2.5	+3.0

Table 2

Comparison of Unadjusted Standards/Guidelines[1]
Laboratory (Average)

State System	Weekly Room Hrs	STD Occupancy Rate	NASF/Station
Other States	24.3	78.5	67.3
Minimum	18.0	70.0	15.0
Maximum	48.0	80.0	240
Maryland	16.5	60.0	62.5
Difference	- 7.8	-18.5	- 4.8

Notes:
1) *Maryland* and *Other States* figures reflect average of ranges specified within Standards/Guidelines for each category. For example, Maryland Community College Space Standards/Guidelines for Classroom NASF/Station in Table 1-A is 19, which is the average of 18 NASF for small colleges and 20 NASF for large colleges.

Source: "An Examination of the Facilities Space Planning Models Used by the Board of Regents and State Board of Community Colleges," MGT of America, Inc., Consultant Report to Florida Postsecondary Education Planning Commission, Appendix B, pp.4.2-4.5, January 2000.

Exhibit B.
MARYLAND HIGHER EDUCATION COMMISSION
MHEC Form S-6 Instructions

Credit Hours and Eligible Continuing Education Enrollment

General Instructions:

This form provides Credit Hours of Enrollment and Eligible Continuing Education Enrollment data for your institution to the Commission and is due at the Commission each November 1 for the Fall Semester.

Multi-Campus institutions must also report enrollment for each of their campuses on the addendum supplied. Enrollment reported on the addendum form is limited to the instruction at the campus indicated and should not include instruction on any Branch Campus, Off-Campus Site or by Distance Learning. These three are reported only on the S-6 for the institution.

The credit hour data provided should be as of your institution's official Fall reporting date or as of October 15. This report shall be audited by the institutions' external auditors and shall be included in the audit report.

For purposes of deciding which location/time category enrollment shall be counted, use the 51% "rule"; that is count the enrollment in the location/time category which includes more than one half:

1. Classes should be reported in the time block where 51% or more of the class is held.
2. Credit classes that begin at times other than the official fall starting date should be included if 51% or more of the course meets during the fall semester.
3. Classes which meet at more than one location should be classified according to where 51% or more of the classes are held.

Lines 1 through 4 are to be completed by all public institutions. Line 5 is to be completed by public community colleges only. Lines 6 and 7 are to be completed by public community colleges for enrollments in eligible continuing education courses.

Credit Enrollment Instructions

Line 3 - Equated credit hours of enrollment for courses not reported on lines 1 or 2 – report equated credit hours of enrollment on this line -- equated on the same basis as normal credit courses, e.g., if 3 weekly contact hours of English 101 equals 3 credits, then 3 weekly contact hours of a prerequisite Non-Credit English may be equated to 3 credit hours. Equate short course to a full semester. If the semester is 16 weeks, then a 3 weekly contact hour Non-Credit English course lasting 8 weeks would count as 1.5 credit hours.

Line 4 – Total of lines 1, 2 and 3

Line 5 - Weekly Student Contact Hours (WSCH) -- The following formula should be used: separate the credit hours into the following categories: credit hours taught in classrooms (110) and laboratories (210). Divide each number by 15. This will yield the FTDE (full time day equivalent) for each category. Multiply the classroom FTDE by 12.5, and laboratory FTDE by 4.5. These calculations yield the WSCHs.

Non-Credit Enrollment Instructions

Line 6 – Report eligible, continuing education full-time day equivalent enrollment by averaging August, September and October of the previous fiscal year.

Line 7 - Weekly Student Contact Hours (WSCH) -- The following formula should be used for non-credit enrollment: (# of times course meets)(# of minutes of instruction per class / 50)(eligible enrollment)

Additional information can be found in the Continuing Education Manual for Maryland Community Colleges (http://www.mhec.state.md.us/CCManual.pdf)

Definitions:

BRANCH CAMPUS CREDIT HOURS – hours for which the instructional activities take place on a permanent instructional unit of a degree-granting institution that is

- approved by the Commission or of a chartered institution;
- located at a site other than the principal location of the approved or chartered institution;
- open to the general public and not a closed site; and
- offers on a continuing basis substantially all the instruction required for an associate or baccalaureate degree.

The physical presence of the student is required at the branch campus for the instructional activity.

CONTINUING EDUCATION COURSE HOURS: Continuing education course hours are the maximum number of hours for which the course will be taught. Course hours are defined as 50-minute segments of instruction. These are the actual instructional contact hours, excluding lunch and other breaks. If a course actually meets 60 minutes each instructional hour, the college may multiply the 50-minute periods by 1.2 to derive the continuing education course hours. Use only whole numbers to represent continuing education course hours.

CREDIT HOUR OF ENROLLMENT -- units of measure applied toward the total number of hours needed for completing the requirements of a degree, certificate, or other award, which represents:

a. a minimum of 15 hours (50 minutes each) of actual class time;
b. a minimum of 30 hours (50 minutes each) of supervised laboratory or studio time;
c. a minimum of 45 hours (50 minutes each) of instructional situations such as Practica, internships, and cooperative educational placements;
d. instruction delivered by instructional television (ITV) or other electronic media based on the equivalent outcomes in student learning of (a) above, and may include a combination of telelessons, classroom instruction, student consultation with instructors, and readings, when supervision is assured and learning is documented.

Credit awarded through departmental examinations, standardized tests, life experience, and portfolio evaluation are not included.

DISTANCE LEARNING HOURS OF ENROLLMENT – hours generated by courses offered by distance learning technologies in which 75% or more of the instruction is offered by telecommunications and the physical presence of the student on a main campus, a branch campus or off-campus site is required 25% or less of the time.

ELIGIBLE CONTINUING EDUCATION COURSE – a course for which academic credit is not awarded and which has met all the criteria to be eligible for state funding.

EQUATED CREDIT HOURS OF ENROLLMENT -- hours associated with remedial, developmental, and other courses designed for students deficient in general competencies necessary for college level work, especially in reading, writing, and mathematics. Typically, these are not credit courses but are prerequisites for credit courses. These **do not** include non-credit, continuing education courses.

FTDE – Full Time Day Equivalent – Fall Credit and/or eligible non-credit hours taught between 8 a.m. and 5 p.m. divided by 15.

MAIN CAMPUS CREDIT HOURS -- hours for which the instructional activities take place on the primary location(s) of the administrative and instructional operations of an approved degree granting institution. The physical presence of the student is required at the main campus for the instructional activity.

OFF-CAMPUS-SITE CREDIT HOURS -- hours for which instructional activities take place at a facility other than the main or branch campus of an approved or chartered institution that

- is not a closed site, but is open to the general public; and
- does not offer substantially all the instruction necessary to offer an undergraduate degree.

The physical presence of the student at the off-campus location is required. The "Off-Campus-Site" category includes foreign branches. Do not include student enrollments in study abroad programs where enrollment is for administrative record only and a nominal fee is paid.

WEEKLY STUDENT CONTACT HOUR (WSCH) -- the equivalent of one student using one station during one hour per week in a classroom or lab. This includes only the hours actually scheduled in a classroom or lab and does not include unscheduled hours in those spaces even if required (examples include language, music, and writing labs classified as HEGIS Code 220).

Exhibit B. Maryland Higher Education Commission S-6 report

Maryland Higher Education Commission
Credit Hours and Eligible Continuing Education Enrollment
Fall _____

Institution:_____ Telephone: _____ Date Reported as of: _____
(the official Fall reporting date)

Contact Person: _____ Email Address: _____

	Main Campus		Branch Campus		Off-Campus Site(s)		Distance Learning	Total
	Before 5:00 PM	5:00 PM or After	Before 5:00 PM	5:00 PM or After	Before 5:00 PM	5:00 PM or After		
1. Credit hours of enrollment in undergraduate courses regardless of student level								
2. Credit hours of enrollment in graduate and first-professional courses regardless of student level								
3. Equated credit hours of enrollment in courses not reported above								
4. Total Credit Hours of Enrollment								

FOR COMMUNITY COLLEGES ONLY

Credit Enrollment

5. Weekly student contact hours generated								
Non-Credit Enrollment								
6. Eligible, continuing education full-time day equivalent enrollment (average for August, September and October of previous fiscal year)								
7. Weekly student contact hours generated by eligible continuing education courses (average for August, September and October of previous fiscal year)								

Signature of Person Completing Form: _____ Date: _____

MHEC S-6 (Revised 2/1/02)

Exhibit C. Space Utilization Standards
State Comparison

	NASF/Station		Utilization (Hrs/Wk)		Occupancy %		Formula = Space Factor Standard	
	Class	Lab.	Class	Lab.	Class	Lab.	NASF / (Utilization x Occupancy)	
State	**110**	**210**	**110**	**210**	**110**	**210**	**110**	**210**
Maryland - Standard	19	63	24	17	63.4%	60.0%	1.11	5.83
California	15	60	48	27.5	66.0%	85.0%	0.47	2.57
Florida	27	55	40	30	60.0%	80.0%	1.13	2.29
North Carolina - Standard	18	70	35	20	65.0%	75.0%	0.79	4.67
Average	18	52	21.3	10.7	57.7%	56.0%	1.46	4.84

Sources:

Maryland	Capital Guidelines Factor Development_ COMAR 13B.07.05.03A-C
California	California Code of Regulations - Title 5. Education
Florida	"State Requirements for Educational Facilities (January 5, 2000)"
North Carolina	UNC-GA Facilities Inventory and Utilization Study Tables 1, 2, 3, 7, 9, 11, 16, 17

Exhibit D. Maryland Community College Space Utilization Survey

MHEC
Creating a state of achievement

Community College Survey Questions

Institutional Research – To be completed by Institutional Research Office (All questions relate to a typical fall semester as of Fall 2006)

R-1 In preparing the MHEC S-6 report, do the definitions provided make it difficult to capture and report total number of hours utilized in the following areas?

Area	Difficult Yes/No	Explanation
Continuing Ed hours		
Distance Ed		
Non credit course hours		
Credit course hours		

Do on-campus contract courses count in room utilization reporting?

R-2 How often does your college review room utilization? What office is responsible for room utilization review?

R-3 How does your college track utilization rates?

R-4 Is your college able to report utilization information for your college's classrooms and class laboratories?

R-5 Is your college using credit or contact hours to determine the Weekly Student Contact Hours (WSCH) for classrooms or class laboratories?

R-6 What office(s) determine(s) how each room is coded in your student information database?

Prepared by: Name_____

Phone _____ Date_____

Community College Survey Questions

Facilities Planning - To be completed by Facilities Planning Office (All questions relate to Fall 2006)

F-1 How is classroom and class laboratory space being inventoried and reported?

How does your college maintain its current inventory of rooms? (Excel spreadsheet, database, other, please describe.)

How often does your college survey space for changes?

What office is responsible for conducting the inventory and assuring accuracy?

F-2 What HEGIS or Space Use codes does your college assign to the following:

Computer-equipped labs used for multiple disciplines: _____

Lab rooms with science or other discipline-specific equipment: _____

F-3 What office(s) determine(s) how each room is coded in your college's student information database?

F-4 Please provide your college's planning guidelines for station sizes for each type of room below:

Type of Room	NASF per Station
Standard Classrooms	
Classrooms with computers at each Station	
Standard Class Laboratories	
Class Laboratories with Computers at each Station	

Prepared by: Name_____

Phone _____ Date_____

Community College Survey Questions

To be completed by Registrar or Institutional Research offices

Credit Courses - Scheduling and Room Use (All questions relate to a typical fall semester as of Fall 2006)

S-1 What time blocks do the majority of your college's credit classes fall into?

Day of Week	45-75 minutes	75-90 minutes	Other (Please describe)
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

S-2 If your college schedule is based on a four-day week, do you schedule any classes on Fridays? What types of classes do you schedule on the 5th day?

S-3 Do you schedule any classes on Saturdays? Please describe.

S-4 Do you schedule any classes on Sundays? Please describe.

S-5 How are classrooms and class laboratories scheduled?

	Classrooms	Class Laboratories
Centrally controlled and scheduled		
Departmentally controlled and scheduled.		
Centrally controlled but departmentally scheduled		
Other (Please describe below)		

S-6 How do you schedule classes and assign rooms?

	Check which applies
Every class and room assignment is entered manually into your student information system (SIS) every semester.	
Student Information System Database (Please provide name) (Example: SCT Banner, Datatel, PeopleSoft, etc.)	
Additional 3rd party software for room assigning, schedule optimization, and reporting, interfacing with your SIS (e.g., Schedule25 or AdAstra with Banner, Datatel, etc.) (Please provide name)	
Other (Please describe)	

S-7 What methods have you implemented to improve room utilization at your college? This may be through scheduling practices or by other means.

S-8 Have you had success improving your college's utilization rates by scheduling classes during off-peak hours such as between 3 and 5 pm? If so, how have you done this?

S-9 Are there course-related room hours that are not being recorded and reported? (e.g. lab prep time, departmentally controlled rooms, on-campus orientation or exams for online classes) Please describe.

Prepared by: Name_____

Phone _____ Date_____

Community College Survey Questions

To be completed by Registrar, Institutional Research, or Continuing Education Office

Continuing Education - Scheduling and Room Use (All questions relate to a typical fall semester as of Fall 2006)

S-1 What time blocks do the majority of your college's classes fall into?

Day of Week	45-75 minutes	75-90 minutes	Other (Please describe)
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

S-2 If your college schedule is based on a four-day week, do you schedule any classes on Fridays? What types of classes do you schedule?

S-3 Do you schedule any classes on Saturdays? Please describe.

S-4 Do you schedule any classes on Sundays? Please describe.

S-5 How are classrooms and class laboratories scheduled?

	Classrooms	Class Laboratories
Centrally controlled and scheduled		
Departmentally controlled and scheduled.		
Centrally controlled but departmentally scheduled		
Other (Please describe below)		

S-6 How do you schedule classes and assign rooms?

Every class and room assignment is entered manually into your student information system (SIS) every semester.	
Student Information System Database (Please provide name) (Example: SCT Banner, Datatel, PeopleSoft, etc.)	
Additional 3rd party software for room assigning, schedule optimization, and reporting, interfacing with your SIS (e.g., Schedule25 or AdAstra with Banner, Datatel, etc.) (Please provide name)	
Other (Please describe)	

S-7 What methods have you implemented to improve room utilization at your college? This may be through scheduling practices or by other means.

S-8 Have you had success improving your college's utilization rates by scheduling classes during off-peak hours such as between 3 and 5 pm? If so, how have you done this?

S-9 Are there course-related room hours that are not being recorded and reported? (e.g. lab prep time, departmentally controlled rooms, online registration and exams) Please describe.

Prepared by: Name_____

Phone _____ Date_____

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College		Allegany	Anne Arundel	Baltimore City	Carroll
R-1. S-6 Report Difficulty					
	Continuing Educating	Yes	Yes	Yes	Yes
	Distance Education	Yes	Yes	No	Yes
	Noncredit Course Hours	Yes	Yes	No	Yes
	Credit Course Hours	Yes	Yes	No	Yes
Do Contract Courses Count		Yes	Yes	Yes	Yes
R-2. Frequency of Utilization Review		Periodic	Annual	Annual	Annual
	Office Responsible	Admissions/Registration and Facilities	Academic Depts. Enrollment Services	Institutional Research	Administration
R-3. Tracking Utilization Rates		None	Resource 25	IR Charts	Resource 25
R-4. Ability to Report Utilization Information		No	Yes	Yes	Yes
R-5. Credit or Contact Hours Used for WSCH		Credit Hours	Contact Hours	Credit Hours	Credit Hours
R-6. Office Responsible for Determination of Room Codes		Institutional Research	Planning, Design and Construction/ Enrollment Services	Facilities	Facilities Management

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College		Cecil	Chesapeake	CC Baltimore County	College of Southern Maryland	Frederick	Garrett
R-1. S-6 Report Difficulty							
	Continuing Educating	No	Yes	Yes	No	No	Yes
	Distance Education	No	Yes	Yes	No	No	Yes
	Noncredit Course Hours	No	Yes	Yes	No	No	Yes
	Credit Course Hours	No	Yes	Yes	No	No	Yes
Do Contract Courses Count		Yes	Yes	No	Yes	Yes	No
R-2. Frequency of Utilization Review		On-going	No	Every Term	Annual	Each Semester	Not reviewed
	Office Responsible	Academic Programs	Institutional Research	Records & Registration	Scheduling Office	Scheduling Office	Dean of Academic Affairs and Dept. of Continuing Education
R-3. Tracking Utilization Rates		Manually	No	Yes	Yes	Yes	Developing
R-4. Ability to Report Utilization Information		Yes	Yes	Yes	In 2009	Yes	Developing
R-5. Credit or Contact Hours Used for WSCH		Credit Horus for Credit, Contact Horus for noncredit	Contact Hours	Contact Hours	Contact Hours	Contact Hours	Contact Hours
R-6. Office Responsible for Determination of Room Codes		Academic Programs	Facilities and Institutional Research	Records & Registration and Capital Planning	Marketing - Scheduling and Conference Services	Scheduling Office	Institutional Research

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College		Hagerstown	Harford	Howard	Montgomery	Prince George's	Wor-Wic
R-1. S-6 Report Difficulty							
	Continuing Educating	No	Yes	Yes	No	Yes	No
	Distance Education	No	Yes	No	No	No	No
	Noncredit Course Hours	No	Yes	Yes	No	Yes	No
	Credit Course Hours	No	Yes	No	No	Yes	No
Do Contract Courses Count		Yes		Yes	Yes	Yes	Yes
R-2. Frequency of Utilization Review		Every Semester	Annual	Every Semester	On-going	Annual	Twice a year
	Office Responsible	Academic Affairs, Dir. of Insruct. And Scheduling, Division Chairs and Dirs., CE staff	Campus Operations, Academic Deans	Academic Affairs and Student Services	Institutional Research, Facilities and Academic Administration	Facilities Management	Academic and Student Affairs Office
R-3. Tracking Utilization Rates		Datatel Reports	CE tracked	AdAstra	Standard reports	No	No
R-4. Ability to Report Utilization Information		Yes	Developing	Yes, Developing	Yes	Yes	Yes, manual
R-5. Credit or Contact Hours Used for WSCH		Credit Hours	Credit Hours	Credit Hours	Contact Hours	Credit Hours	Contact Hours
R-6. Office Responsible for Determination of Room Codes		Facilities	Campus Operations, Conferencing & Meetings	Information Technology	Central Facilities	Facilities Management	VP of Administrative Services

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Allegany	Anne Arundel	Baltimore City	Carroll
F-1. Method of Inventory and Reporting of Classroom and Class Laboratory	Reported in College Space Inventory Kept in college database system.	Datatel Colleague Database	Excel spreadsheet	Excel spreadsheet
Frequency of review	Annual	Annual	Annual	Annual
Office Responsible for Conducting Inventory	Institutional Research	Planning, Design and Construction	Facilities Planning	Facilities Management
F-2. HEGIS Codes				
Computer-equipped Labs	210	210	210	110
Lab Rooms - Science and Other	210	210, 220	210	210
F-3. Office Responsible for Determination of Room Codes	Institutional Research	Planning, Design and Construction	Facilities Planning	Facilities Management
F-4. Planning Guidelines for Station Sizes (NASF per station)				
Standard Classrooms	18	22	22	18
Classrooms with Computers	18	25	35	30
Standard Class Laboratories	50/115	25	22	25-30
Class Laboratories with Computers	50/115	28	35	32

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Cecil	Chesapeake	CC Baltimore County	College of Southern Maryland	Frederick	Garrett
F-1. Method of Inventory and Reporting of Classroom and Class Laboratory						
Frequency of review	Excel spreadsheet Annual	Excel spreadsheet Annual	Excel spreadsheet On-going	CAD Annual	Excel spreadsheet Annual	Excel spreadsheet Annual
Office Responsible for Conducting Inventory	VP of Administrative Services and Dir. of Facilities	Facilities	Records & Registration and Capital Planning	Physical Plant	Facilities Planning	Facilities
F-2. HEGIS Codes						
Computer-equipped Labs	110	220	110, 210	210	210	220
Lab Rooms - Science and Other	210		210	220	210	210
F-3. Office Responsible for Determination of Room Codes	Academic Programs	Facilities	Records & Registration and Capital Planning	Marketing - Scheduling and Conference Services	Scheduling Office	Facilities and Academics
F-4. Planning Guidelines for Station Sizes (NASF per station)						
Standard Classrooms	*18-20*	*18*	23	30	18-20	18
Classrooms with Computers	20-25	18	40	25	30-40	18
Standard Class Laboratories	50/115	50/115	45	30	20	50
Class Laboratories with Computers	50/115	50/115	65	25	40-50	50

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Hagerstown	Harford	Howard	Montgomery	Prince George's	Wor-Wic
F-1. Method of Inventory and Reporting of Classroom and Class Laboratory						
Frequency of review	Access and Excel Annual	Excel spreadsheet Annual	Excel spreadsheet Annual	Excel for inventory, SCT Banner for scheduling Annual	Excel, AdAstra and Mainframe Continuous	Excel spreadsheet to CIP Tables Annual
Office Responsible for Conducting Inventory	Facilities	Campus Operations	Plant Operations	Central Facilities	Facilities Management	VP Administrative Services
F-2. HEGIS Codes						
Computer-equipped Labs	210	210	210	110, 210	210	210
Lab Rooms - Science and Other	210	210	210	210	220	210
F-3. Office Responsible for Determination of Room Codes	Facilities	Campus Operations, Conferencing & Meetings	Plant Operations and Facilities	Central Facilities	Facilities Management	VP Administrative Services
F-4. Planning Guidelines for Station Sizes (NASF per station)						
Standard Classrooms	18-22	25	18	20,32	30-34	21
Classrooms with Computers	30	32	40	32	30-34	32
Standard Class Laboratories	40-50	48	20	50/115	42-45	51,76
Class Laboratories with Computers	40-50	48	40	32/115	42-45	32

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Allegany	Anne Arundel	Baltimore City	Carroll
Credit Courses				
S-1. Time Blocks for Majority of Credit Classes				
Monday	45-75	45-75	75-90	75-90
Tuesday	45-75	75-90	75-90	75-90
Wednesday	45-75	45-75	75-90	75-90
Thursday	45-75	75-90	75-90	75-90
Friday	45-75	45-75	45-74	
Saturday	N/P	Other (3 hr.)	45-74	
Sunday	N/P	Other (3 hr.)		
S-2. Schedule Classes on Fridays	5-day Week	5-day Week	Yes	N/A
S-3. Schedule Credit Classes on Saturdays	No	Yes	Yes	Yes
S-4. Schedule Credit Classes on Sundays	No	Yes	Rarely	No
S-5. How are Classes and Class Laboratories Scheduled				
Classrooms				
Centrally Controlled and Scheduled	X	X		
Departmentally Controlled and Scheduled				
Centrally Controlled but Departmentally Scheduled			X	X
Other				
Class Laboratories				
Centrally Controlled and Scheduled				
Departmentally Controlled and Scheduled				
Centrally Controlled but Departmentally Scheduled	X	X	X	X
Other				

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College		Cecil	Chesapeake	CC Baltimore County	College of Southern Maryland	Frederick	Garrett
Credit Courses							
S-1. Time Blocks for Majority of Credit Classes							
	Monday	Other	75-90	45-70, 75-90	75-90	Other	75-90
	Tuesday	Other	75-90	45-70, 75-90	75-90	Other	75-90
	Wednesday	Other	75-90	45-70, 75-90	75-90	Other	75-90
	Thursday	Other	75-90	45-70, 75-90	75-90	Other	75-90
	Friday	Other	Other	45-70, 75-90	Other	Other	75-90
	Saturday	Other	Other	75-90	Other	Other	
	Sunday	Other	Other	75-90	75-90	Other	
S-2. Schedule Classes on Fridays		Yes	Limited	7-day Week	Yes	Yes	Field Classes
S-3. Schedule Credit Classes on Saturdays		Yes	Limited	Yes	Yes	Yes	Yes
S-4. Schedule Credit Classes on Sundays		No	Limited	Yes	Yes	No	Yes
S-5. How are Classes and Class Laboratories Scheduled							
	Classrooms						
	Centrally Controlled and Scheduled	X	X	X	X		X
	Departmentally Controlled and Scheduled						
	Centrally Controlled but Departmentally Scheduled					X	
	Other						
	Class Laboratories						
	Centrally Controlled and Scheduled	X	X	X	X		X
	Departmentally Controlled and Scheduled						
	Centrally Controlled but Departmentally Scheduled					X	
	Other						

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Hagerstown	Harford	Howard	Montgomery	Prince George's	Wor-Wic
Credit Courses						
S-1. Time Blocks for Majority of Credit Classes						
Monday	Other (3 hrs)	75-90	Mixed	45-75	45-75	75-90
Tuesday	Other (3 hrs)	75-90	Mixed	75-90	45-75	75-90
Wednesday	Other (3 hrs)	75-90	Mixed	45-75	45-75	75-90
Thursday	Other (3 hrs)	75-90	Mixed	75-90	45-75	75-90
Friday	Other	Other	Other	45-75	45-75	Other
Saturday	Other	Other	Other	Other	Other (3 hrs)	Other
Sunday	Other		Other		Other (3 hrs)	
S-2. Schedule Classes on Fridays	5-day Week	Yes	Yes	5-day Week	5-day Week	Yes
S-3. Schedule Credit Classes on Saturdays	Yes	Yes	Yes	Yes	Yes	Yes
S-4. Schedule Credit Classes on Sundays	Yes	Noncredit	Yes	No	Limited	No
S-5. How are Classes and Class Laboratories Scheduled						
Classrooms						
Centrally Controlled and Scheduled				X	X	
Departmentally Controlled and Scheduled	X					X
Centrally Controlled but Departmentally Scheduled		X	X			
Other						
Class Laboratories						
Centrally Controlled and Scheduled					X	
Departmentally Controlled and Scheduled	X					X
Centrally Controlled but Departmentally Scheduled		X	X	X		
Other						

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Allegany	Anne Arundel	Baltimore City	Carroll
S-6. Schedule Classes and Assign Rooms				
Entered Manually into SIS Every Semester	X	X	X	
Information Database	Informix SQL	Datatel	Co-Co SIMS	Datatel
Additional 3rd Party Software		Resource 25	Resource 25	Resource 25
Other				
S-7. Methods to Improve Room Utilization	Using 3-5 PM time period	Protocol for prioritizing multiple requests for space. *Standards for* section start times. Alternative and Accelerated Semesters	*Continuously* monitor room assignments and openings identified.	Cancel low-enrolled sections, shift to hybrid courses, raise course caps, add afternoon classes, increase number of early start times.
S-8. Success in Improving Utilization Rates with Off-Peak Hours	Some	Pair hybrid courses. Analyzing location of classes in appropriate space Some	Some	Yes
S-9. Are there Course-related Hours not Being Recorded and Reported	Lab Prep	Lab Prep, distance course testing, meeting events.	*Lab prep,* orientation, on-line course exams, open labs.	No

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Cecil	Chesapeake	CC Baltimore County	College of Southern Maryland	Frederick	Garrett
S-6. Schedule Classes and Assign Rooms						
Entered Manually into SIS Every Semester	X	X		X	X	
Information Database		Datatel	SCT Banner	Datatel	PeopleSoft	
Additional 3rd Party Software			Schedule 25	Ad Astra (09)	Schedule and Resource 25	Scheduler Plus
Other						
S-7. Methods to Improve Room Utilization	Meeting Room Manager software, schedule management practices, implementation of late start classes, classes offered 6 days a week, Administrative meetings to review scheduling	Utilize classroom assignments according to enrollment needs.	Hired consultants, consolidated three colleges into one, set annual budget based on average class size, monitor and cancel low-enrolled sections, set consistent scheduling timeframes.	AdAstra software, established time slots or block scheduling.	Scheduling more rooms during non-peak hours	Schedule classes early morning and late afternoons
S-8. Success in Improving Utilization Rates with Off-Peak Hours	Yes	Some	Yes	Yes	Yes	Yes
S-9. Are there Course-related Hours not Being Recorded and Reported	Lab prep, open labs, experiential fieldwork courses	Lab prep, departmental rooms, orientation, on-line course exams	Lab prep, orientation, on-line course exams, community group meetings	Course additional class time	No	Lab prep, make-up exams

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Hagerstown	Harford	Howard	Montgomery	Prince George's	Wor-Wic
S-6. Schedule Classes and Assign Rooms						
Entered Manually into SIS Every Semester		X			X	X
Information Database	Datatel	SCT Banner	Datatel	SCT Banner		
Additional 3rd Party Software	AdAstra (future)		AdAstra	Considering	AdAstra	
Other						
S-7. Methods to Improve Room Utilization	Access databases for real-time room utilization, hybrid courses scheduled in conjunction with one another, courses requiring on-campus computer lab use.	Room updates in SCT Banner, Deans and CE division review room utilization	AdAstra software implemented	Adding sections in off-prime class times, bringing non-standard class times into standard class times, adding online and hybrid classes	Standard start and end times, developed campus/web courses, Friday only sections for some lecture courses	Scheduling early morning and late afternoon classes. Scheduling required classes at less popular times
S-8. Success in Improving Utilization Rates with Off-Peak Hours	Some	No	Yes	Some	Moderate	Yes
S-9. Are there Course-related Hours not Being Recorded and Reported	Lab prep, testing, student center activities, adjunct faculty office hours, academic advising, orientation	No	Study time for science courses, special labs	Lab prep, open lab	Lab prep, software upgrades	Orientations, clinical components of health science classes, tutoring and practice sessions in labs

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College		Allegany	Anne Arundel	Baltimore City	Carroll
Continuing Education/Noncredit					
S-1. Time Blocks for Majority of Credit Classes					
	Monday	Other (2-4 hours)	Other (2+ hrs)	Other	Other
	Tuesday	Other (2-4 hours)	Other (2+ hrs)	Other	Other
	Wednesday	Other (2-4 hours)	Other (2+ hrs)	Other	Other
	Thursday	Other (2-4 hours)	Other (2+ hrs)	Other	Other
	Friday	Other (2-4 hours)	Other (2+ hrs)	Other	Other
	Saturday	Other (2-4 hours)	Other (3+ hrs)	Other	Other
	Sunday	Other (2-4 hours)	Other (5+ hrs)		
S-2. Schedule Classes on Fridays		Yes	7 day week	Yes	Yes
S-3. Schedule Noncredit Classes on Saturdays		Yes	Yes	Yes	Yes
S-4. Schedule Noncredit Classes on Sundays		Yes	Yes	No	Occasionally
S-5. How are Classes and Class Laboratories Scheduled					
	Classrooms				
	Centrally Controlled and Scheduled	X	X	X	
	Departmentally Controlled and Scheduled				
	Centrally Controlled but Departmentally Scheduled				X
	Other				
	Class Laboratories				
	Centrally Controlled and Scheduled	X	X	X	
	Departmentally Controlled and Scheduled				
	Centrally Controlled but Departmentally Scheduled				X
	Other				

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Cecil	Chesapeake	CC Baltimore County	College of Southern Maryland	Frederick	Garrett
Continuing Education/Noncredit						
S-1. Time Blocks for Majority of Credit Classes						
Monday	Other	45-75	All	75-90	75-90	Other
Tuesday	Other	45-75	All	75-90	75-90	Other
Wednesday	Other	45-75	All	75-90	75-90	Other
Thursday	Other	45-75	All	75-90	75-90	Other
Friday	Other	45-75	All	Other	75-90	Other
Saturday	Other	Other	All	Other	75-90	Other
Sunday		Other	75-90, Other	Other		Other
S-2. Schedule Classes on Fridays	Yes	Limited	Yes	Some	Yes	Yes
S-3. Schedule Noncredit Classes on Saturdays	Yes	Limited	Yes	Some	Yes	Yes
S-4. Schedule Noncredit Classes on Sundays	Yes	Limited	Yes	No	Yes	Yes
S-5. How are Classes and Class Laboratories Scheduled						
Classrooms						
Centrally Controlled and Scheduled	X		X		X	
Departmentally Controlled and Scheduled						X
Centrally Controlled but Departmentally Scheduled		X		X		
Other						
Class Laboratories						
Centrally Controlled and Scheduled	X		X		X	
Departmentally Controlled and Scheduled						X
Centrally Controlled but Departmentally Scheduled		X				
Other						

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Hagerstown	Harford	Howard	Montgomery	Prince George's	Wor-Wic
Continuing Education/Noncredit						
S-1. Time Blocks for Majority of Credit Classes						
Monday	Other (3 hrs)	75-90	Other	Other	Other (2-3 hrs)	Other (2 hrs)
Tuesday	Other (3 hrs)	75-90	Other	Other	Other (2-3 hrs)	Other (2 hrs)
Wednesday	Other (3 hrs)	75-90	Other	Other	Other (2-3 hrs)	Other (2 hrs)
Thursday	Other (3 hrs)	75-90	Other	Other	Other (2-3 hrs)	Other (2 hrs)
Friday	Other (3 hrs)	Other	Other	Other	Other (2-3 hrs)	Other (2 hrs)
Saturday	Other (5+ hrs)	Other	Other	Other	Other (2-3 hrs)	Other (2 hrs)
Sunday	Other (6+ hrs)	Other	Other		Other (2-3 hrs)	Other (2 hrs)
S-2. Schedule Classes on Fridays	5-day Week	Yes	5-day Week	Yes	5-day Week	Yes
S-3. Schedule Noncredit Classes on Saturdays	Yes	Yes	Yes	Yes	Yes	Yes
S-4. Schedule Noncredit Classes on Sundays	Sometimes	Yes	Yes	Yes	Limited	Yes
S-5. How are Classes and Class Laboratories Scheduled						
Classrooms						
Centrally Controlled and Scheduled	X				X	
Departmentally Controlled and Scheduled						
Centrally Controlled but Departmentally Scheduled		X		X		
Other			X			X
Class Laboratories						
Centrally Controlled and Scheduled					X	
Departmentally Controlled and Scheduled	X					
Centrally Controlled but Departmentally Scheduled		X		X		
Other			X			X

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Allegany	Anne Arundel	Baltimore City	Carroll
S-6. Schedule Classes and Assign Rooms				
Entered Manually into SIS Every Semester		X	X	X
Information Database	Informix SQL	Datatel	Co-Co-CERTS	Datatel
Additional 3rd Party software	EMS Lite	Resource 25	Resource 25	Resource 25
Other				
S-7. Methods to Improve Room Utilization	Market Demand	*Scheduling* protocol, departmental guidelines for special purpose classrooms, review dept. plans in advance.	Continuously monitor room assignments and openings identified.	Schedule classes and assign classroom after cancellation decisions are made.
S-8. Success in Improving Utilization Rates with Off-Peak Hours	Market Demand	Yes	Some	No
S-9. Are there Course-related Hours not Being Recorded and Reported	Prep time	Prep time	Open labs	On-line courses

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Cecil	Chesapeake	CC Baltimore County	College of Southern Maryland	Frederick	Garrett
S-6. Schedule Classes and Assign Rooms						
Entered Manually into SIS Every Semester	X	X		X	X	
Information Database		Datatel	SCT Banner	Datatel	PeopleSoft	
Additional 3rd Party software			Schedule 25		Resource 25	Scheduler Plus
Other		Web-based building schedules				
S-7. Methods to Improve Room Utilization	Meeting Room Manager software, schedule management practices, implementation of late start classes, classes offered 7 days a week, Administrative meetings to review scheduling	Utilize classroom assignments according to enrollment needs.	Centralized approach between Con Ed course scheduler and campus room scheduling technicians	AdAstra software implementation in 2009, scheduling practices.	ConEd scheduling moved to central office	Using off-campus space for noncredit and using space for both credit and noncredit courses.
S-8. Success in Improving Utilization Rates with Off-Peak Hours	Unsure	Limited	Subject to avail.	N/A	Yes	Some
S-9. Are there Course-related Hours not Being Recorded and Reported	Open lab, fine arts studio, lab prep, meetings and workshops, practice and recital	No	Focus groups, short-term training, workgroups and meetings	No	No	Prep time

Exhibit E. Maryland Community Colleges
Space Utilization Survey Response Summary

College	Hagerstown	Harford	Howard	Montgomery	Prince George's	Wor-Wic
S-6. Schedule Classes and Assign Rooms						
Entered Manually into SIS Every Semester	X	X		X	X	X
Information Database	Datatel	SCT Banner		SCT Banner		
Additional 3rd Party software	AdAstra soon		AdAstra		AdAstra	
Other						
S-7. Methods to Improve Room Utilization	Access database developed to monitor scheduling and utilization	Room updates in SCT Banner, Deans and CE division review room utilization	Room scheduler automated room scheduling, less manual intervention, increased communication	*Match noncredit* and credit class start and end times, schedule follow up course to nontraditional course lengths for continuous room use	*Con Ed* classrooms scheduled 5 days before class scheduled to begin, allowing to fill space from canceled credit classes.	Moved from off-campus to on-campus locations when space is available
S-8. Success in Improving Utilization Rates with Off-Peak Hours	No	No	Yes	Yes	Some	Some
S-9. Are there Course-related Hours not Being Recorded and Reported	No	No	No	Open lab	No	Set-up and break-down time